

ENDANGERED SPECIES ACT REAUTHORIZATION

HEARING
BEFORE THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE
CONSERVATION AND THE ENVIRONMENT
OF THE
COMMITTEE ON
MERCHANT MARINE AND FISHERIES
HOUSE OF REPRESENTATIVES
ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

H.R. 1467

TO AUTHORIZE APPROPRIATIONS TO CARRY OUT THE ENDANGERED
SPECIES ACT OF 1973 DURING FISCAL YEARS 1988, 1989, 1990, 1991,
AND 1992

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ENDANGERED SPECIES ACT REAUTHORIZATION

TUESDAY, MARCH 17, 1987

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON FISHERIES AND WILDLIFE
CONSERVATION AND THE ENVIRONMENT,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:06 a.m., in room 1334 Longworth House Office Building, Hon. Gerry E. Studds (chairman of the subcommittee) presiding.

Present: Representatives Studds, Anderson, Hubbard, Hughes, Tauzin, Carper, Thomas, Ortiz, Bateman, Saxton, Miller, Sweeney, DioGuardi, Weldon, and Saiki.

Also present: Representatives Rose, Marlenee, Stenholm, and Craig.

Staff present: Bill Woodward, Gina DeFerrari, Will Steele, Reynaldo Patino, Joyce Sacco, and Tom Melius.

STATEMENT OF HON. GERRY E. STUDDS, CHAIRMAN, SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION AND THE ENVIRONMENT

Mr. STUDDS. The committee meets this morning concerning H.R. 1467, a bill to authorize funds to carry out the Endangered Species Act through the end of fiscal year 1992. If enacted, and if fully implemented through appropriations, this bill would revitalize the endangered species listing and recovery process and bring far closer to fulfillment the goals of the original Endangered Species Act.

Today's witness list illustrates the fact that the responsibility for protecting endangered species is spread over a broad range of federal agencies and that the protection process is sometimes accompanied by conflict and cost.

Controversy over particular problems, however, cannot obscure the importance of protecting species from the threat of extinction. The naturalist John Muir once wrote that, "Whenever we try to pick up anything by itself, we find it attached to everything in the universe." When a life form ceases to exist, the potential of that life form to contribute to the richness of our world forever vanishes, and such contributions should not be underestimated.

Even the most humble of life forms—obscure plants, insects, and Members of Congress, for example—have made contributions. The Madagascar periwinkle has proven useful in the fight against cancer, and small plants and animals form essential links in the chain of life.

During the last Congress we tried—but—failed to enact an endangered species reauthorization bill. I trust that any conflicts that arise this year can be resolved without jeopardizing the reauthorization, and I pledge to do all that I personally can to see that this occurs.

I must give fair warning, however, that I will not support any amendment that would significantly undermine the overall integrity and effectiveness of the Endangered Species Act.

Our hearing today will be divided into two sessions. We will try to finish this morning in time to break for lunch and to return for the afternoon session at 1:30.

I want to thank Congressmen Ortiz and Tauzin for requesting a special panel on the shrimp-sea turtle controversy and for the help provided by their offices in preparing for this hearing.

Because we have a long list of witnesses, we must, to be as fair as possible to everybody, abide strictly by the 5-minute rule for both witnesses and, God help us all, ourselves. For this reason I urge anyone who might be tempted at some point to leave certain things unsaid to succumb to that temptation. [Laughter.]

Let me acknowledge the gentleman from Washington who, I believe, wishes to make an opening statement.

STATEMENT OF HON. JOHN R. MILLER, A U.S. REPRESENTATIVE FROM WASHINGTON

Mr. MILLER. Thank you, Mr. Chairman.

Just 13 years ago the Congress passed the Endangered Species Act for the purpose of preserving animals and plants for the next generation and the one after that. Now, we have heard horror stories about a project to save some small creature that no one ever heard of stopped. The truth is that those are very, very rare cases. What this law has taught us to do as a society is to look for the alternative, for the modification which enables the project and that small creature to both continue. We get the benefit of the project and the benefit of preserving for the next generation that plant or animal.

The Endangered Species Act has worked for the benefit of our society, I believe, and, Mr. Chairman, I am confident this act will continue to be a valued piece of Federal law.

I look forward to hearing from today's witnesses and to working with you to promptly reauthorize this valuable Federal law.

Mr. STUDDS. I thank the gentleman.

At this point in the record, without objection, the statements of our ranking members of the full committee and subcommittee, Mr. Davis of Michigan and Mr. Young of Alaska, will appear in the record.

[The prepared statements of Mr. Davis and Mr. Young follow:]

STATEMENT BY HON. ROBERT W. DAVIS, A U.S. REPRESENTATIVE FROM MICHIGAN

Mr. Chairman, I am pleased to join with you as we begin the reauthorization of the Endangered Species Act of 1973.

Our purpose today is to hear testimony on legislation that would extend the Endangered Species Act of 1973 through Fiscal Year 1992. The Act is among the world's strongest laws in preventing species extinction. It does so through a variety of methods designed to bring species back to a point where protection is no longer needed. These include: listing as endangered or threatened, designation and acquisi-

tion or critical habitat, trade controls, state Federal and international cooperation, and the regulations of Federal agency activities.

Under the latter provision, such agencies are required to use their authorities to conserve endangered and threatened species and to ensure that their actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitats. This requirement is carried out through interagency consultation which is intended to identify reasonable development alternatives that do not conflict with species conservation.

This legislation has been amended over the years to speed up the listing process of species, specifically concerning the determination of critical habitat.

Our intent is to develop legislation that will protect species from direct and indirect impacts that could eventually cause extinction. The Endangered Species Act of 1973 is strong and maturing. It's been streamlined and improved over the years, and hopefully our efforts today will continue with this process.

Thank you, Mr. Chairman.

STATEMENT BY HON. DON YOUNG, A U.S. REPRESENTATIVE FROM ALASKA

Mr. Chairman, I am pleased to join you today as we again begin the reauthorization of the Endangered Species Act of 1973. It seems our efforts during the last Congress don't quite get this accomplished, so we proceed once again.

As you have stated, this Act is among the world's strongest laws in providing a multi-faceted approach for the protection of endangered species. During its history, the Act has been modified several times to provide a balance between species protection and needed development projects. I think all of us agree that the goals of the Act are indeed noble. I would hope, though, that if this balance needs further review, we do so in a manner of compromise, to develop legislation that will result in a strong, effective and rational program to protect endangered species.

I want to share in the welcome to our witnesses and assure them that I will listen carefully to what they have to tell us.

Mr. STUDDS. The gentleman from Texas?

**STATEMENT OF HON. SOLOMON P. ORTIZ, A U.S.
REPRESENTATIVE FROM TEXAS**

Mr. ORTIZ. Thank you, Mr. Chairman. Mr. Chairman, I appreciate your holding this hearing today on the reauthorization of the Endangered Species Act. I have long been a supporter of efforts to protect our plant and animal species from extinction. I join many other members of this subcommittee in supporting the reauthorization of the Endangered Species Act and look forward to hearing the testimony presented by the witnesses here today.

Mr. Chairman, as you know, I am particularly interested in the panel that will discuss the impact of the proposed National Marine and Fisheries Service regulations requiring the use of turtle excluder devices by shrimpers in the Southeastern United States. These proposed regulations have a direct impact on my congressional district as well as others along the Gulf and Atlantic Coasts. I expect the discussion by that panel to be quite lively and I appreciate your granting my request to allow the subcommittee to consider that subject. Thank you, Mr. Chairman.

Mr. STUDDS. I thank the gentleman.

The gentleman from Georgia.

**STATEMENT OF HON. ROBERT LINDSAY THOMAS, A U.S.
REPRESENTATIVE FROM GEORGIA**

Mr. THOMAS. Mr. Chairman, if I might go back and take just a moment to make a statement, I too have all of the Georgia coast in my district, where we have the loggerhead turtle, and we have a

tremendous fishing industry there on the Georgia coast, and I am very concerned and interested about these aspects. But I do hope today that regardless of our concern around this or any of the other specific issues, that we don't allow these things to bog the main issue down, which is to get the Endangered Species Act reauthorized.

I certainly want to say that even though I have an intense parochial in these specific hearings, that I want to do all I can to see that we do move to reauthorize the bill.

Mr. STUDDS. I thank the gentleman.

Are there other members who wish to make opening statements?
[No response.]

Mr. STUDDS. If not, we will begin hearing from those of our colleagues who have asked to testify, beginning with our distinguished friend from Montana, Congressman Marlenee.

STATEMENT OF HON. RON MARLENEE, A U.S. REPRESENTATIVE FROM MONTANA

Mr. MARLENEE. Thank you, Mr. Chairman, for the opportunity to testify today before your subcommittee as you begin reauthorization of the Endangered Species Act. Mr. Chairman, as ranking member on the National Parks and Public Lands Subcommittee of the Committee on the Interior, I have several concerns about the Endangered Species Act particularly as it relates to the recovery of the Rocky Mountain wolf and the grizzly bear.

Montana struggled for many years with the recovery of the grizzly bear, a threatened species protected under the act. Unfortunately, because of the act, and unfortunately for the grizzly, the environmentalists and the obstructionists have misused the grizzly to cause delays in proposed timber sales, to prevent Federal land managers from issuing livestock grazing permits in some areas and to stop the control by the State agencies of the grizzly bear population even when that population is threatening, threatening some of the small towns and rural schools out in our areas. In other words, we have the grizzly bears coming down into the brush bottoms, getting close to the schools, the rural schools, and the children are in fact endangered in some areas because of the grizzly bear threat in those bottoms around those small communities. They are coming down there out of the mountains in the summer for the berries, the garbage, one thing and another.

Now, although the grizzly is a federally protected species, the State of Montana is forced to supply the funding and the management for the bear, and yet it has little flexibility in that management, and that is why the Endangered Species Act must be changed. On the grounds that they don't have the opportunity—the States don't have the opportunity to manage—on the grounds which require immediate action that are delayed while State officials check with Federal and regional officials in Denver who check with Federal officials in Washington, D.C.

Now, many a farmer and rancher has been left at a phone booth while their livestock is threatened, while decisions are made in regard to grazing permits and one thing and another like that. Now I am going to tell you one story, a personal story, about graz-

ing permits. There was a rancher who had a sheep permit, and this sheep permit was up in the mountains and it was for something like, I believe, if my memory serves me correctly, 400 sheep. A letter came to this rancher which said that he could not carry a rifle when he went up there into the mountains, when he rode up into the mountains.

Well, my response to that was, "Meet me at high noon because I will have a 357 strapped on my side, and I will be riding up there with the rancher if you'd like to go up there and inspect that area of the mountains in the U.S. Forest Service range."

It was a direct contravention and intervention by the U.S. Fish and Wildlife and the Forest Service in the right to carry and bear arms and also in the right to protection of one's property. I think that is carrying the intent of the act a little bit too far.

Now, when it comes to the wolf, we are told not to worry because the wolf recovery plan will designate the wolf as experimental, thereby making the wolf threatened in the three areas proposed for recovery.

Well, from our experience with the grizzlies, we find little consolation in the threatened status, and I along with the Montana Department of Fish and Wildlife and Parks am even more concerned with the definition of threatened after the defenders of wildlife sued the Secretary of the Interior for attempting to allow trapping season on wolves in Minnesota.

Now, the eighth circuit held that the Secretary had the authority to take threatened species for conservation purposes only in extraordinary situations. Well, what happens, and what is extraordinary? I call this "litigation legislation." I think that has been proven. What happens when the wolf pack consumes deer and elk and moose that would have been available for sportsmen? Will the State be able to control the wolf to protect our big-game hunting seasons, or will it be forced to close areas for hunting?

Mr. Chairman, there are those who claim the wolf will not have an effect on big-game populations, but I want to point out that a single wolf pack, which is a female and male and four wolf pups, can kill 23 elk or 88 deer in one winter. The wolves kill more than just the sick and the lame animals. Montana has recognized as one of the last opportunities to hunt big game, and the State cannot continue to successfully manage these populations when it has no control over a Federally protected species or has no protection from the lawsuits by the obstructionists or the environmentalists or the organizations like the Defenders of Wildlife.

An even bigger management problem occurs in those areas outside of the experimental zone where the wolf is protected by the Endangered Species Act. The 1985 court decision in Minnesota held there could be virtually no taking of an endangered species. Now, in Montana we have the ridiculous situation—and I would point out how ridiculous this is—where the wolf is a predator, with a bounty in Canada, until it crosses that imaginary line called a boundary, and then it magically becomes endangered or threatened.

Now, the wolf is not globally endangered and should not be listed as such, and we should have the flexibility to take those things into consideration under our act. I have passed out to members of the

committee an article that appeared in *Sports Afield* called "Wolves at my Door." There is some humor in this article. It is written tongue-in-cheek, and I would suggest it as fun reading for the members of the committee when you are considering this act. Over the years I have written articles about the wolves, their increasing predation on wildlife and domestic animals. It tells about the wolves on the outskirts of White Horse in the Yukon, and it certainly points out how the wolf is not an endangered or threatened species, but that the children and pets on the outskirts of this, one of the major towns of Canada, are the threatened ones.

Finally, Mr. Chairman, recovery of the wolf creates problems for our predator control programs. In 1985 Montana sheepmen lost \$2 million worth of sheep to predators, and this happened even though thousands are spent on predator control. Allowing the wolf recovery in Montana takes manpower and funds away from animal damage control. Under the present arrangement, ADC is funded by the Department of Agriculture. The Fish and Wildlife Service expects ADC to be the lead agency in trapping and moving predator wolves. Yet no provisions have been made for increasing funding in ADC.

Furthermore, a possible wolf sighting in an area—I say a possible wolf sighting—in an area can stop all predator control action because officials in charge of endangered species fear that ADC will mistakenly kill the wolf. Now, we are told not to worry about conflicts between predator control programs and the wolf. We are told that there are few conflicts between the wolf and livestock because in Minnesota the livestock producers have learned to change their management and to minimize conflicts.

Now, I keep hearing over and over again this rhetoric about, "Well, we can handle this endangered and threatened species; they do it in Minnesota. That's fine; there's no problems there. There is no predation," et cetera, et cetera, et cetera. I am getting sick and tired of hearing it.

They don't bother to tell you the differences. There are vast differences between raising livestock in Minnesota versus Montana. In Minnesota the average farm in the northern portion of the State where the wolf exist is about 500 acres. The total number of cattle in the entire State is a mere 280,000 head of beef cattle in that State. Now, because of the small size of the farms and the relatively few cattle, farmers are able to intensively manage—intensively manage—their herds. The cattle in Minnesota can be intensively managed and rarely are out of the sight of the producer.

Now, the average size farm in Montana, and perhaps in Texas, is nearly 3,000 acres, and the total cowherd in Montana is something like 2,400,000, while sheep account for another 500,000, and management often consists of calving and handling that livestock on the open range, whereas in Minnesota they have the opportunity to immediately bring that livestock into a corralled area or to take it in every night.

Closing, Mr. Chairman, States which are burdened—and I emphasize burdened—by endangered species and threatened species need more flexibility in managing these species. In respect to the wolf, we do not need any experimental population transplanted into the greater Yellowstone area or the northern ecosystems.

Where the wolf is recovering naturally, Congress should legislatively delist the wolf so that wildlife agencies can properly manage it in conjunction with the big-game populations, allowing it to be trapped, hunted, and harvested.

Those who say that, well, we can reintroduce the wolf into selected areas like Yellowstone Park or some selected wilderness areas don't realize that as soon as that happens and the wolf ranges for 300 miles or 400 miles or 150 miles even, he is out of that experimental zone and he is into the areas of livestock management, big-game harvests, and that that wolf will then be used even though the promise is there of harvesting that wolf and keeping it under control, the threat is there then of stopping timber harvests, stopping road building, stopping oil exploration on public lands, and even hunting seasons. And if you think not, just go to the Defenders of Wildlife's own periodical here of—I don't have the date on it—but in which they brag about the lawsuit that was brought against the management and the U.S. Fish and Wildlife in the Minnesota area.

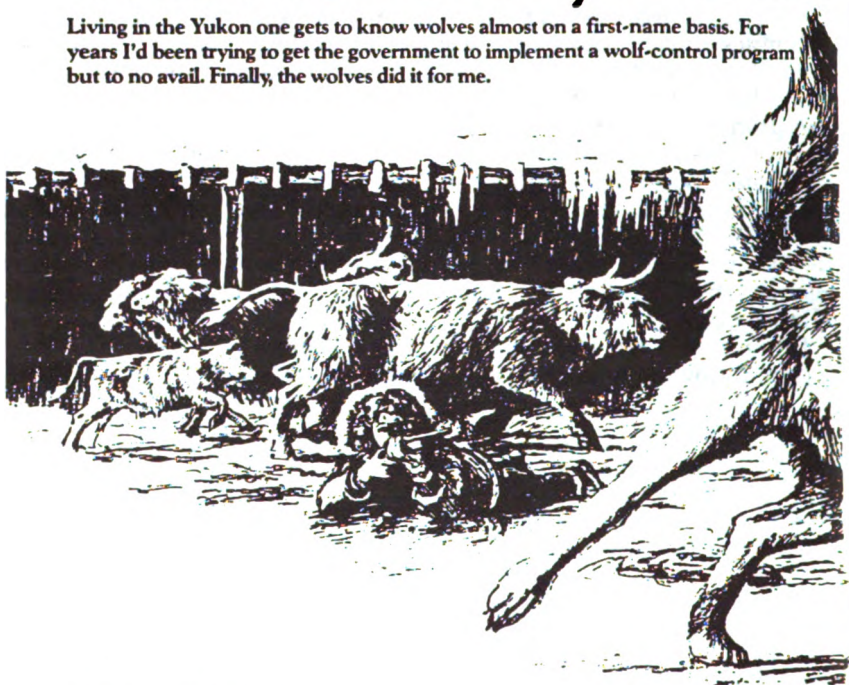
I thank you, Mr. Chairman, for our patience.

[The following was submitted by Mr. Marlenee:]

FW 3-17-87
 AR 1467

Wolves At My Door

Living in the Yukon one gets to know wolves almost on a first-name basis. For years I'd been trying to get the government to implement a wolf-control program but to no avail. Finally, the wolves did it for me.



By Dolores Cline Brown

The Yukon is well known for its temperature extremes but even the old soundoughs were caught off guard when the mildness of early October changed to a wicked -35° during the latter part of the month.

The Arctic spruce stood stark and white under a thick layer of frost. A light snowfall was enough to cover the earth in a sparkling crystal carpet of deceptive tranquility. Here in the Far North, life for both man and beast can be but a hair's breath from death.

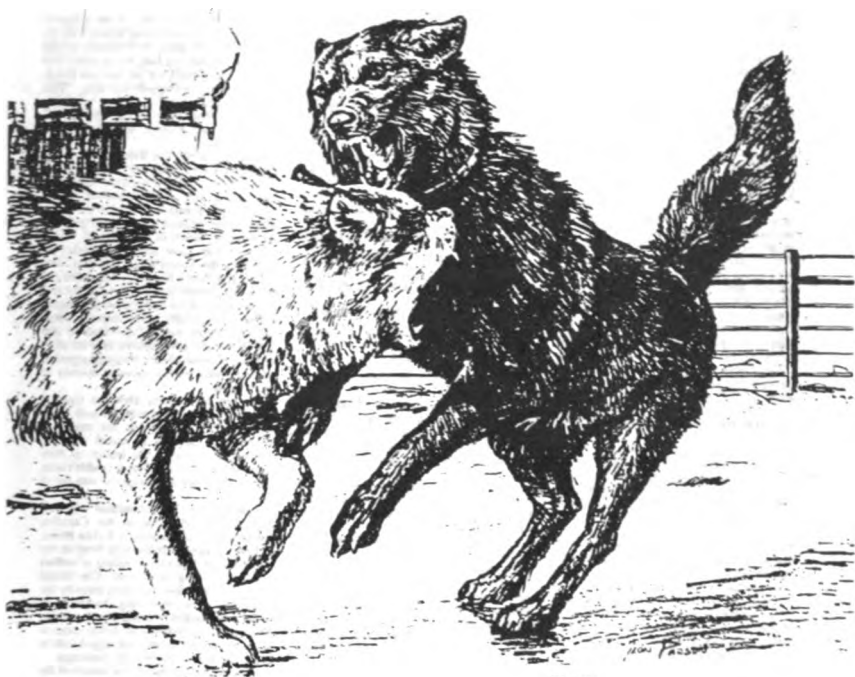
In our sturdy log cabin I was stirring

a moose stew when I heard Kazan, our oversize Belgian Shepherd, barking in decibels that meant trouble. Grabbing the .270 Winchester from the gun rack, I hurriedly flipped up the folded-down open iron sight. Dashing to the cabin door and flinging it open, I glanced back at my husband. Louis had been lulled to sleep by the warmth of the old barrel stove after he had returned from a cold trip on his trap line. I hesitated a moment while I wondered if I should waken him in case I needed help.

Another uproar from Kazan and I

dashed down the trail toward the corral. Several head of Scotch Highland cattle were peacefully chewing their cud, paying no attention to the blood-chilling roars, snarls and howls coming from the thick brush behind them.

Before I could get the large pole gate opened, Kazan and a gray wolf burst into the open in a tangled ball of fighting fury. The cattle started milling and bawling, getting between me and the battling animals. Scrambling to the top of the gate I tried to get a clear shot over the cattle but, before I could pull



the trigger, a cow got ~~the~~ head in the sights. In desperation I hopped to the frozen ground but now their legs were in the way. Snatching up a large stick I flung it over the gate, yelling an octave only panic can produce. A cow jumped to the side to avoid being hit. This opened a lane of fire and I screamed at Kazan. He jumped back giving me my one chance.

I pulled the trigger. The wolf gave a spasmodic jerk and went down but it was up the next moment, lunging for Kazan. The two rolled under the rail

and tumbled among the cattle. The terrified cattle now raced in circles around the struggling pair, making it impossible to get in a shot. When I crawled between the bars in a frantic attempt to get the cattle behind me, my slick seal-skin mukluks skidded on the frozen cattle urine and I fell flat on my face. This scared the cattle even more and, for a moment, they grouped at the far end of the corral. Firing from a belly position I heard the bullet strike the wolf but the fighting didn't slow. Kazan appeared to be losing and

looked badly hurt. The cattle started racing around. One of the cows didn't see me in time to detour so she jumped over me and one of her hind feet caught me in the side of the head, knocking off my parka hood. I screamed hoping to wake Louis. Kazan would surely be dead before I could get back to the cabin, if I went after help.

Kazan and I have had our wolf problems before. Living on a trap line in the Yukon you can always expect wolf problems, and I have learned to recognize and pay attention to my sheep-

herd's wolf-warning barks because they're in a different key than his "company's coming" or "a husky is loose" barks. The only time I made the mistake of ignoring his wolf-warning barks, I ended up with every hair on my head feeling as if it was attached to one of Medusa's coils.

That day Kazan had killed two mother robins and was tied up for the disgrace. As I passed him on the way to the cache he was barking furiously. "Serves you right," I told him. "Stop trying to be a bird dog and you can be free."

As I drew close to the cache, Kazan seemed to go into hysterics. I rounded the log corner of the cache and ran into a wolf. But was the wolf surprised? It must have heard me coming. At that moment, I thought of nothing but retreat, but the wolf never moved. Gasping for breath I started to run and yell. "Wolf . . . WOLF!"

Louis burst out of the cabin door carrying his .308 Savage.

"For God's sake, calm down," he said. "Where?"

I didn't have to point for the wolf was now in plain sight between the cache and the barn. Before Louis could get the sights on the wolf it was behind the barn, then out into the garden and crossing in front of us, only about 50 feet away. Louis shouldered his gun and followed its progress with the gun's .308 sight. I was about ready to collapse from the suspense. Why didn't my husband shoot? I couldn't stand it any longer and yelled. "Shoot . . . SHOOT!"

"Hell, I can't," my husband exclaimed.

"The tractor is right in line and I'm not going to blow a hole in my machinery for a lousy wolf."

I didn't buy that excuse. I think he was so mesmerized by the sheer audacity of the wolf that he forgot to shoot.

When Violet, a lovable husky, was let loose for a run and never came back we had our fears. Several nights later, Louis was sleeping in the tent by the trail, not far from the cabin, when Kazan awakened him with his familiar wolf bark. Taking his .308, Louis quietly eased through the tent flaps and sneaked a few paces up the trail. Between the branches of alder he saw movement. Looking through his 4X Lyman scope he saw a patch of fur about the size of a dollar. He doubted it would be possible to hit anything through so much brush but he made a snap shot. Louis could hardly believe his luck when he ran up the trail and found he had killed a large gray wolf. The next day my husband skinned him and opened him up to find some of poor Violet's hair inside.

Later, Cloudy, another husky, never returned from his run. When a husky doesn't return at chow time, it is very likely that he has ended up as an hors d'oeuvre for some wolf.

These dog and wolf skirmishes often have unexpected consequences. Old Silver Fox told about one of his huskies getting loose. The Indian followed the chain drag marks. Suddenly he came on his dog fighting a wolf. It was a matter of seconds before the wolf killed the husky and started dragging him off into the brush. Silver Fox ran back to his camp to get his gun. When

he returned, he found the wolf lying beside the dog—dead.

We have a large cream-color Siberian Husky named Sandy and he is hated with an unmitigated jealous passion by Kazan, who pronounces him every chance he gets. Every night after losing a fight, Sandy—it seems in pure retaliation—jumps on top of his doghouse, raises his muzzle to the Northern skies and howls until he is answered by a long drawn-out moan. If the moon is full and bright or the Northern Lights are strong, we can see the pack coming across the meadow. If it is a dark night, we switch on our Mini Venus 110,000-candispower 12-volt spotlight. It is eerie seeing those gleaming yellow eyes.

The doghouses are only 50 feet from our door but the close proximity of humans never stops the wolves. When they get close, Sandy sneaks into his doghouse leaving Kazan braced for a fight.

Louis has a strong opinion about this. "I know darn well Sandy does this to get the wolves in to lick Kazan."

When one of our huskies didn't return at chow time, we knew he had probably ended up as an hors d'oeuvre for some wolf.

We aren't always home to stop the fighting, so you can see that the fight in the corral I was first telling you about was just one more battle for our shepherd. For once, it looked like he was getting the worst of it. I was frantic.

I knew quick action was needed but I didn't know where to place my next shot because the two bullets already in the wolf hadn't had much effect.

A young heifer drew too close to the fighting pair and was bitten. Bellowing and racing around the corral, she got the bull, Reigh Roary, Chieftain of Sequoia, upset and excited. He let out a roar, pawing and throwing shovels full of snow over his back until he looked like a snow blower. I jumped up, skidded to the fence, straddled the top pole and yelled at the wolf, "I'll get you this time right in the head."

The open iron sights weaved back and forth on the combating pair. It was almost impossible to distinguish the gray head of the wolf from Kazan's darker coloring in their violent shifting of postures. When Kazan stumbled and fell, with the wolf right at his throat, I knew my pet would be dead anyway so I squeezed the trigger.

When the bullet struck, the wolf's head

fopped back. It laid still for a moment then

crawled under the fence. When I saw

Kazan walk away alive I sank down on the

snow trembling with relief that I hadn't

killed him.

Louis came running toward me carrying

his Winchester .3030.

"Are you trying to start a war?" he asked.

"I think I killed a wolf," I told him.

"What? On my trap line? That's against the law," Louis said, blustering in mock seriousness, trying to hid me out of my state of agitation.

Louis walked over to the wolf and whistled. "He's a big one. I bet he'll weigh more than 175 pounds. But the fur auctioneer will sure dock us for those extra holes."

Kazan trotted over to give me a bloody but loving swipe across my cheek with his tongue. He was pretty well chewed up and one eye was closing fast, but he could still wag his tail. Seeing my pet torn and bleeding upset me. I snapped and said, "This place is hell."

"Never heard of hell being -35°," Louis is replied and grinned, shivering in his shirt-sleeves.

Over the years, I've written articles telling about wolves and their increasing predation of wildlife and domestic animals. I had hoped that sensible control, which would keep a balance between the dwindling game populations and the growing wolf packs, would be established.

There was some action in Alaska but people in the Yukon remained silent, with the exception of a few intrepid Whitehorse citizens who wrote letters informing me that wolves were on the endangered list, almost extinct and grossly misunderstood. Some correspondents were of the opinion that wolves should have priority over all other animals because of their romantic appeal to tourists, who provide valuable revenue to the Yukon.

Instead of counting sheep at night, I started counting the number of wolf packs I'd like to turn loose on the streets of Whitehorse. But as it turned out, the wolves took care of the matter on their own. Metro-Goldwyn-Mayer couldn't have done a better job of scaring the wits out of people.

Last fall we were astonished when we flipped the radio dial to the Canadian Broadcasting Corporation's Yukon News, to hear enraged farmers, who lived on the periphery of Whitehorse, telling of wolves ruthlessly killing their horses. One farmer stated that 30 horses had been eaten by the predators. The remaining horses were being safeguarded by being kept in corrals. This suited the wolves fine. It was easier to jump the corrals to get their dinner than to chase the horses all over the landscape.

Like Alfred Hitchcock, the master of the thriller, the wolves didn't believe in losing the action slow. Louis and I stayed glued to our radio during local news time, not wanting to miss a single episode in this red-hot drama. And we weren't disappointed.

Now the wolves were into high gear. The Yukon government's Department of Renewable Resources received a phone call from a person who said a wolf pack was ravaging downtown Whitehorse.

The survivors began to cackle with infuriated residents' descriptions of pet dogs being dragged from their doghouses and killed. The count of pet killed by wolves

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resumed to 10, then 12 and then 15. And this figure didn't include the dead cats, chickens and pet rabbits.

Shirley Grant and Linda Beckett told of wolves coming within 10 feet of their bedroom window and killing their two dogs. Grant angrily related how the wolf was large enough to be saddled and ridden by a 9-year-old child.

On hearing this, Louis shook his head and told me, "The department of tourism must be feeding the wolves vitamin supplements to make them bigger to attract the tourists."

Later, the *Yukon News* ran a picture of Grant and Beckett riding shotgun at their residence. The distraught Grant said, "If nothing else, I'll have the satisfaction of shooting my dog's killer."

Now the press became alarmed and was of the opinion that: "Anything that moves is a threat. It could be someone else's family pet or it could be a child or an adult out for an evening stroll."

Louis agreed and warned me, "You'd better not wear your wolf cap to Whitehorse, anymore. You'll get plugged for sure."

Grant told the press: "I know they [conservation officers] can't bring back my dogs but I wish they would at least make more of an effort to get the wolves."

On hearing this I could hardly believe my ears, remembering those scathing letters I had received from Whitehorse resi-

dent

Grant also revealed that one officer had admitted that a wolf could attack a child if it were hungry enough. She said, "It scares the hell out of you."

I fully sympathized with the two women but I doubted any wolf would be dumb enough to make himself a target just to appease them.

If the action slowed down, the wolves ate another pet dog or cat to rekindle the uproar. As if to taunt the Whitehorse residents, the wolves would howl back at the one-time wolf lovers who admitted they were terrified. Sometimes I couldn't help smiling. The wolves were doing an excellent job of proving they weren't extinct.

But the big shocker came when Horst Mueller, a Whitehorse resident, sizzled the airwaves when he reported that his mother, who lived in West Germany, had called to make sure her grandchildren were safe. She told him that *Bild Zeitung*, one of Europe's largest newspapers with a circulation of 5.8 million, had published a story telling of children in Whitehorse being devoured by wolves and of seven northern Canadians being killed by wolves.

Not only was the *Bild Zeitung* having a field day with sensational stories—to was England's *Daily Mirror*. Our own *Yukon News* grew alarmed and ran a headline: "Wolf Story In Paper Could Mean Disaster For Tourism."

Howard Tracey, the minister of renewable resources, said in an interview that his primary concern about the European ac-

The wolves were getting too high a rating to just remain on the local CBC news. They were becoming celebrities and reaching stardom fast. Now they began to be featured on CBC coast-to-coast radio shows such as "Sunday Morning," "Morning Side" and "As It Happens."

Listening to the CBC's top commentators talking about our Yukon wolves made us think our predators had reached the top of the ladder of fame—but we were wrong.

Next thing we knew they were crowding celebrities off the screen. On January 13, 1983, "The Journal" television show presented the wolves. We now expect Hollywood to give our wolves an Oscar for the best performance of the year.

At long last, the Yukon government announced that a \$50,000 wolf-management program would be launched. The program is designed to create an economic incentive for trappers to catch wolves. Each trapper is to receive \$200 for every wolf pelt turned over to the department of renewable resources for auction.

At a recent birthday celebration, I raised my glass high to give a toast: "Here's to wolves," I said. "God bless them. They induced the Yukon into action when I couldn't."

Just the other day the *Yukon News* raised the question: "Where will it end?" Knowing wolves and how few are stupid enough to get into a trap, I'd say it's just beginning.



Mr. STUDDS. Thank you, Mr. Marlenee. If you can assure us that this article has humor in it, we will put it in the record at once, along with your statement. I appreciate that.

We will go next to our distinguished colleague from Texas, the Honorable Charles Stenholm.

Welcome, sir.

**STATEMENT OF HON. CHARLES W. STENHOLM, A U.S.
REPRESENTATIVE FROM TEXAS**

Mr. STENHOLM. Thank you, Mr. Chairman. I appreciate very much the opportunity to spend just a few minutes before you today in this discussion of the reauthorization of the Endangered Species Act. I have a statement for the record that I would like to submit in its entirety, and I will briefly summarize.

Mr. STUDDS. Without objection.

Mr. STENHOLM. You may or may not be acquainted as a committee with the Stacy dam project in Texas and the Concho River water snake, an incident very similar to the snail darter. We have had considerable problems in meeting the requirements of the interpretation of the Endangered Species Act of many, many well-meaning individuals. It is now at a point where we may or may not be able to go on with the project. If the dam is built, it will be at a tremendously increased cost over what common sense would have told us it should have been.

What particularly has infuriated my constituency and the constituency of my colleagues from around west Texas is that this project has no Federal dollars involved. This was a project that we built to provide water for dry west Texas. It was funded by the local Governments and was obviously funded by people who wanted and recognized the necessity of additional drinking water in the future.

If Stacy dam is completed, it will be solely because the local water district has made every attempt to appease the Fish and Wildlife Department in agreeing with many terms which I personally disagree I think they have gone far too far in some things that I call ridiculous as requirements.

What really makes it difficult, I guess, for many of us to understand is that most testimony by all individuals concerned with the Concho water snake admit that if nothing were to happen, there is only a 70 to 80 percent assuredness that the Concho River snake, or at least the subspecies we're talking about, will survive. But yet, by spending \$5 to \$7 million—and this is growing every day as the district tries to meet in good-faith efforts, the requirements of this law of our land—the best we can do is increase by a marginal 5 to 10 percent the chances that the snake will in fact survive.

Now, Mr. Chairman, and members of this committee, I would hope that you would study in detail how this interpretation of this law has affected this project, in the hopes that, first off, this project will be built because compromises have been reached, that there will be no lawsuits, that there will be no additional frustrations of the district to build the dam and that people will accept this compromise that has happened.

What I hope, and this is my reason for being here today, is two-fold: one is the current project; two is future projects and how various interpretations of this act could cause such a tremendous amount of unnecessary money to be spent.

Let me interject here, and the one major point I want to make is, I realize and I support the Endangered Species Act, but it is the "Species Act," not the "Subspecies Act." And I hope we will not let our overzealousness to protect the environment impair basic human necessities.

How would you like to tell 400,000 of your citizens that they don't have drinking water because we are protecting a dwindling population of snakes whose future is in jeopardy regardless of the measures taken to protect it? How would you like to tell your constituency that there are no Federal dollars involved in building the lake, what they're doing is providing for the water, yet they may be stopped from building it because of a narrow interpretation of a law?

That is a question that I pose to the committee. I ask that you take a good hard look, as I know you will, Mr. Chairman, at some of the interpretations of well-meaning individuals. I guess since humor may be a requirement to get into the record, Mr. Chairman, I would close by saying that as a west Texas farmer, which I am in real life, I have had great difficulty understanding how we do something negative to a water snake by providing him with more water?

Thank you, Mr. Chairman.

[The prepared statement of Mr. Stenholm follows:]

STATEMENT OF HON. CHARLES W. STENHOLM, A U.S. REPRESENTATIVE FROM TEXAS

Mr. Chairman and members of this subcommittee: thank you for allowing me the opportunity to be here to address a pressing issue. This hearing is of vital interest to me, to all the residents of West Texas, and whether they realize it or not, to all the citizens of our great country. You see today we are discussing more than just the reauthorization of the Endangered Species Act. You are considering legislation that could make West Texans, not wildlife, the endangered species. In short, I am concerned that — despite its fine intentions — the Act's priorities are a bit misplaced.

Before I go on, let me say that I support the need for conservation and preservation of our natural resources and our precious creatures. I am not opposed to legislation that protects the environment. I am opposed to legislation that puts the needs of a snake over the needs of the people. Let me cite a specific example regarding this.

You may be acquainted with the Concho River Water Snake episode. It is similar to the Snail Darter incident of 10 years ago. The habitat of this little-known water snake happens to be located at the same place a badly-needed water project has been proposed in my district. Stacy Dam would meet the water needs of Abilene, San Angelo and much of West Texas through the year 2010, as well as provide a boost to local economies.

Because of the way the Endangered Species Act is written the needs of my district and those of my West Texas colleagues' were ignored. The only thing that concerned the Fish and Wildlife Service was the well-being of this supposed, endangered critter. Well folks, the water situation in West Texas is also in danger, but that didn't seem to matter. As Representatives of the people, we should pass laws that

protect the men, women and children of this land, not just the snakes, wolves and snails.

This Act should have a means of prioritizing the human and economic needs of an area when considering candidates for the Threatened or Endangered Species Act. Such a clause is needed to look out for the best interests of our citizens. In some cases, it is painfully obvious that listing a species could negatively affect people. Despite these facts, because of the way the law is on the books, we foresake common sense and blindly enforce regulations that fail to consider the impact on the human environment.

If Stacy Dam is built, it will be at an exhorbitant cost. It should not have been this way. This was a project funded entirely by a local water authority and its service fees to participating municipalities. At a time when federal costs for similar programs continue to escalate, this could have been a prime example of local governments taking the initiative without government help. Unfortunately, what they got was a bad case of government intervention on behalf of a reptile. Because the Department of Interior stepped in to protect this snake, the cost of the project has skyrocketed. Is it any wonder that our constituents feel like they're dealing with snakes — at home and in Washington? If Stacy Dam is completed, it will be solely because the local water district has made every attempt to appease the Fish and Wildlife Department, agreeing to terms too severe for this project. Some of the imposed restrictions border on the ridiculous. Opponents of the dam will tell you that enough is not being done, but let me tell you there is nothing further from the truth. This whole scenario must be avoided in the future by adopting measures to consider human and economic factors into the listing formula.

Let me interject here that I realize the role of the Endangered Species Act. But it is the "Species Act," not the "Sub-species Act." Do not let our overzealousness to protect the environment impede basic human necessities.

We must realize that our laws are limited. There is only so much our laws can govern, and nature is not one of them. It's part of nature that one sub-species dies out and another is born. Mandating us to spend more money is not going to stop the natural process. With this in mind, we must weigh the pros and cons of the costs of our protective environmental decrees.

I realize that we must have a benchmark when discussing protection of an Endangered Species. I am not advocating total revision of this carefully-crafted piece of legislation. I am suggesting that human needs in regard to the environment deserve more consideration.

The Concho snake issue is not as complex or scientifically perplexing as some other cases you may encounter. The simple truth is that we in West Texas live in an arid climate and we need more water. It is an area where most parts average eight or nine inches of rain a year. Water is the key to the survival of the people who live there. Put yourself in my position. How would you like to tell 400,000 of your citizens that they don't have drinking water because we're protecting a dwindling population of snakes, whose future is in jeopardy regardless of the measures taken to protect it? How do you explain such a thing?

Intangibles must be considered by our laws. As water becomes more and more scarce, and as our population grows, I suspect more instances like this will come before you. We must take action now.

Thank you for allowing me to touch upon this important aspect of the Endangered Species Act. Depending on the outcome of the Stacy Dam project, it may be necessary to introduce amendment legislation to change such neglected objectives. I appreciate your consideration.

Mr. STUDDS. Thank you, Mr. Charlie. You will get nowhere by references to real life in this institution. [Laughter.] But I appreciate that.

Now to our friend and colleague from Idaho, we welcome you, Larry.

Congressman Craig.

STATEMENT OF HON. LARRY E. CRAIG, A U.S. REPRESENTATIVE FROM IDAHO

Mr. CRAIG. Thank you very much, Mr. Chairman. I guess I could only tell my colleague from Texas that maybe he ought to resurrect St. Paddy, who could drive the snakes out of Texas and then he could go ahead with his dam project, because obviously the Congress won't.

Mr. STUDDS. I am afraid that would require an EIS. [Laughter.]

Ms. STENHOLM. Would the gentleman yield?

Mr. CRAIG. I would be happy to yield.

Mr. STENHOLM. I want to be certain that the record shows that I am for the snake. The more I have come to appreciate the Concho water snake, I would not be interested in driving him out. We want more of them.

Mr. CRAIG. I assume that you would want that read into the record and that it should be thoroughly read by the constituents of that area of your district. [Laughter.]

Mr. STENHOLM. Absolutely.

Mr. CRAIG. Fine.

Mr. STENHOLM. Absolutely.

Mr. CRAIG. Mr. Chairman, let me thank you for the opportunity to testify before your committee this morning and to reflect upon your opening statement. I don't think there is a member of this panel this morning that is asking for major changes in the Endangered Species Act, but an application of the act that shows a reasonableness and an understanding of humans and their existence and need to exist on this continent and in certain areas where I guess mankind kind of believes it ought to dominate to some degree.

My colleague from Montana, I think, has clearly spelled out the concern that exists in western States about the northern Rocky Mountain wolf recovery plan. I say it is a plan. It is a plan that has been under study and under design for a substantial period of time now, and we are looking at that design plan at this time.

In 1982, as the effort got underway, I thought it was important that the constituents of my district participate in the design of the plan and understand it. So I held a couple of town meetings in my district, thinking I would gather but a few people who were interested in or concerned about wolves, primarily professionals who would wish to testify and provide me with information. In one instance in a central Idaho community that would become a buffered area of a plan design, a small room was provided. It filled up. We finally had to cancel that room and move to a town hall, and there were nearly 250 people present, on just the limited notice that there would be people there to explain the proposed wolf recovery plan.

There was tremendous emotion involved because those citizens, most of them residing in the rural area of Idaho (which is almost all of Idaho), had read of the episodes that are depicted in this article and others like it, and the incidences in Minnesota, and were in essence saying: "Why is the Federal Government attempting to reinstitute wolves into an area where for the last 100 years we have been working to eliminate them so we can exist in peace and safety?"

It is very difficult to understand or to explain this kind of conflict. One young woman said she and her husband, both Ph.D's, had decided to move from California to the back country of Idaho to pursue that lifestyle. Some people call those types survivalists; there are a variety of names for them. Eventually, this couple decided to have children. Those children grew to school age. Those children, because of the choice of their parents to live in a rural setting, were forced to walk some four-and-a-half miles to a bus stop in the dark of the early morning.

That mother, who I think came from California with the hope of residing in an environment that was natural, where she and her family could coexist with Mother Nature, said—and said it very clearly—"If you reinstitute wolves and my children are in danger, I will kill those damn wolves, and then I will bury them so the Federal Government can't take away from me the lifestyle I have chosen."

That is the kind of conflict that can ultimately result if we do not allow for a reasonable and practical application of the law that has all good intent in mind.

Now, the kind of plan we are looking at in Idaho and Montana and Wyoming and the potential reintroduction of wolves has a great many people concerned. For example, in the central portion of Idaho we have a large land mass known as the Frankchurch River of No Return wilderness. There is not much concern by Idahoans that wolves should reside there and they should be able to move back and forth from Yellowstone and the Montana-Wyoming areas into that particular area. It is a wilderness, and I think because of that, Mr. Chairman and members of the committee, it is understandable that wildlife ought to be allowed to reside there in its natural habitat.

There is a problem with this, though: Wolves can't read, you can't put signs up on the boundary of the wilderness that say: "You're beyond your natural terrain and you must return." Wolves by their very nature must move with the food source, and as the elk move into the upper wilderness areas in the summer months and the early spring months to calve, so will they move out of the wilderness in the fall and winter months into the lower elevations for habitat and to simply survive in the winter.

Now, it so happens that as those elk move and as the wolves would move with them, they move into areas where cattle and sheep winter and where human beings reside. In kind of recovery we are talking about and the loop pattern of variety of areas in which the wolf would be dominant and in which the wolf would be semidominant and in the third area where the human would be dominant, the great problem is the poor wolf simply doesn't understand that there are locations that are off-limits to it, and it must

return to the areas where it is king, which during certain season of the year might have no food source at all.

Now, that is reality, Mr. Chairman. Yet, reality is not played out very well in the minds of those who attempt the grand scheme of things in deciding the wolf once again will be dominant over man. Idahoans won't tolerate that. It is plain and simple. They will exist with it, but they will very quietly go about their business of eliminating that poor animal when it gets in their way and burying it and saying nothing about it, so that the Feds can't track them down, can't prosecute them for violating a Federal law for their own preservation or for the preservation of their own property.

Now, that is reality, Mr. Chairman, and we ought to recognize that, when we deal with endangered species, we are talking about species that are truly in danger. My colleague from Montana mentions it just simply is not the case with the wolf. We put the wolf in a very precarious circumstance. Idahoans don't hate wolves. In fact, we are very proud that we see in our back country the wolf beginning to recover under its own power. We know by approximate counts that there are 50,000 wolves in Canada, there are 4,500 to 6,000 wolves in Alaska and there are nearly 1,200 by approximate count in Minnesota. We also know that as the wolf, which can be hunted and controlled in Canada, crosses the boundary between Idaho and Canada or Montana and Canada, it immediately becomes a Federally protected animal.

Now, Mr. Chairman, I believe that is simply nonsense, but that is the reality of the law, and it is the reality of the law in its stiffest form of implementation.

So we will use force, in our attempt to do good, to preserve for our environment those things that by their natural attrition may choose to leave this environment. We will simply say, "We are going to force you to stay, and mankind, although you may once have been dominant, you will now be relegated by Federal law to living a lesser role because we have chosen for you a change in your environment."

I do not think there is any member of this committee that believes this law ought to be implemented with that intent in mind. And I would hope this committee would recognize that and make the necessary, very limited modification that would keep species that are truly not endangered in the hemisphere but because of man's relation to them have chosen to live elsewhere, off the endangered species list. We ought not be wasting huge sums of money in an effort to do something that is, in large part, as unnatural or unreasonable as we are attempting to do with the wolf recovery program in the Rocky Mountain West. This simple logic has been spelled out by my colleague from Montana and by thousands of people around the State of Idaho.

Thank you, Mr. Chairman. Let me close with this statement. Idahoans don't hate wolves. They simply recognize that there is a place for the wolf, there is a place for the human and they don't get along very well if you force them to live in the same place. Thank you very much.

[The prepared statement of Mr. Craig follows:]

STATEMENT OF HON. LARRY E. CRAIG, A U.S. REPRESENTATIVE FROM IDAHO

MR. CHAIRMAN, THANK YOU FOR ALLOWING ME THE OPPORTUNITY TO PRESENT COMMENTS CONCERNING THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT (ESA) AND MORE SPECIFICALLY THE NORTHERN ROCKY MOUNTAIN WOLF RECOVERY PLAN (NRMW).

I AM VERY INTERESTED IN THE WOLF RECOVERY PLAN AND HOW IT WILL AFFECT IDAHO. AS YOU KNOW, IDAHO IS ONE OF THREE STATES THAT HAVE BEEN IDENTIFIED FOR THE ESTABLISHMENT OF A WOLF RECOVERY MANAGEMENT AREA. THE WOLF RECOVERY PLAN HAS BECOME A HOTLY DEBATED ISSUE AND AN EMOTIONAL ONE.

LET ME GIVE YOU AN EXAMPLE OF THE EMOTION THAT SURROUNDS THE WOLF RECOVERY PLAN, IN IDAHO. IN 1982, I HAD A TOWN MEETING SCHEDULED TO DISCUSS THE ISSUE OF WOLF RECOVERY AND WHAT THE PEOPLE OF CENTRAL IDAHO THOUGHT ABOUT THIS IDEA. THE MEETING WAS SCHEDULED IN A SMALL ROOM, BECAUSE MY STAFF BELIEVED THE TURNOUT WOULD BE SMALL. AS YOU CAN PROBABLY SURMISE, THE TURNOUT WAS SO LARGE, WE HAD TO HALT THE MEETING AND MOVE TO THE TOWN HALL TO TRY TO ACCOMMODATE ALL THE PEOPLE WHO WANTED TO DISCUSS THE ISSUE.

SINCE 1982, IF THERE IS ONE SURE WAY TO GET PEOPLE TO ATTEND A TOWN MEETING, ALL YOU HAVE TO DO IS ANNOUNCE THAT THE MEETING WILL BE ABOUT "WOLF RECOVERY."

MR. CHAIRMAN, I DON'T THINK IDAHOANS ARE WOLF HATERS. IT IS MY BELIEF THAT THEIR CONCERNS CENTER AROUND THE WOLF RECOVERY PLAN AND THEIR BELIEF, THE PLAN UNNECESSARILY FAVORS WOLF ACTIVITIES OVER HUMAN ACTIVITIES.

THE WOLF RECOVERY PLAN PROPOSES TO CREATE AN AREA THAT IS 3000 SQUARE MILES IN SIZE. IN IDAHO THIS CREATES A PROBLEM BECAUSE IN ORDER TO ACHIEVE THE 3,000 SQUARE MILES, YOU ARE FORCED TO GO OUTSIDE THE BOUNDARIES OF THE FRANK CHURCH RIVER OF NO RETURN WILDERNESS AREA AND CHANGE THE CURRENT USE OF FEDERAL LANDS.

A GOOD EXAMPLE OF THIS IS, THE WOLF RECOVERY PLAN PROPOSES TO INCLUDE THE MALLARD LARKINS. THE MALLARD LARKINS AREA IS CURRENTLY BEING MANAGED BY THE FOREST SERVICE UNDER MULTIPLE USE PRACTICES. THIS AREA IS VERY IMPORTANT TO LOCAL COMMUNITIES AS A SUPPLY FOR TIMBER THAT IS USED TO SUPPORT HIGHWAY MAINTENANCE AND CONSTRUCTION, SCHOOLS, AND BASIC SERVICES.

SIXTY-SIX PERCENT OF IDAHO'S CURRENT LAND BASE IS OWNED AND MANAGED BY THE FEDERAL GOVERNMENT. IF THE WOLF RECOVERY PLAN ENVISIONS THAT IT WILL NOT CONFINE ITSELF TO THE NOW EXISTING CONGRESSIONALLY DESIGNATED WILDERNESS AREAS, THE PEOPLE OF IDAHO WILL OPPOSE IT.

LET ME LIST SOME OTHER THINGS THAT I PERCEIVE AS PROBLEM AREAS OF THE CURRENT DRAFT OF THE NORTHERN ROCKY MOUNTAIN WOLF RECOVERY PLAN.

ON THE ISSUE OF "TRAVEL CORRIDORS" THAT THE WOLF RECOVERY PLAN PROPOSES, I PERCEIVE AN INHERENT CONFLICT ARISING BETWEEN CURRENT MULTIPLE USE ACTIVITIES IN THE PROPOSED "CORRIDORS" AND THE CURTAILMENT OF THESE ACTIVITIES. WHILE THE "TRAVEL CORRIDORS" WOULD BE DESIGNED TO LINK THE THREE PROPOSED WOLF RECOVERY AREAS WITH EACH OTHER AND CANADA, IT IS THE CURTAILMENT OF MULTIPLE USE ACTIVITIES TO PROTECT THE WOLF THAT CONCERNS ME.

AS YOU KNOW, MR. CHAIRMAN, THE ONGOING ANIMAL DAMAGE CONTROL PROGRAM IS EXTREMELY IMPORTANT TO LIVESTOCK OPERATORS. ON PAGE 39, PART 372, THE WOLF RECOVERY PLAN ASKS FOR VIRTUAL ELIMINATION OF THAT PROGRAM. I REALIZE THE GOAL OF THE PLAN IS TO ENHANCE THE POPULATION OF THE WOLF BUT IF YOU LIMIT THE "TAKING" OF A ROGUE WOLF OR WOLVES, THE LIVESTOCK INDUSTRY WILL ONLY SUFFER.

SOMETHING ELSE THAT CONCERNS ME IS, THE WOLF RECOVERY PLAN NEVER DISCUSSES OR RECOGNIZES THAT ALASKA HAS A POPULATION OF 4,500 TO 6,000 WOLVES; THERE ARE 50,000 WOLVES IN CANADA; AND MINNESOTA HAS APPROXIMATELY 1,200 WOLVES.

THESE WOLF POPULATIONS APPEAR TO BE SUSTAINING THEMSELVES, IN FACT, THE STATE OF ALASKA HAS A PREDATOR CONTROL PROGRAM TO DEAL WITH THE WOLF. I REALIZE WE ARE NOT TALKING ABOUT ALASKA, CANADA OR MINNESOTA, BUT IT APPEARS TO ME WE ARE MOVING FORWARD WITH A WOLF RECOVERY PLAN THAT MAY NOT BE NEEDED.

THE WOLF MOVES FREELY BETWEEN CANADA AND THE U.S. ONCE HE ENTERS THE U.S., HE IS PROTECTED AS AN ENDANGERED ANIMAL. NATURAL RECOLONIZATION CAN OCCUR IF IT IS GIVEN A CHANCE, BUT TO FORCE A PLAN ON WESTERN STATES WHO OPPOSE IT, MAY ENCUMBER NOT INCREASE THE WOLF POPULATION.

IN THE INTEREST OF PRESERVING TIME, LET ME CONCLUDE MY REMARKS BY SAYING THIS, THE DRAFT PLAN HAS MANY QUESTIONS STILL LEFT UNANSWERED: HOW WILL CONFLICT SITUATIONS BE SOLVED? WHAT IS THE ACTUAL SIZE OF A WOLF RECOVERY AREA? IF A HEALTHY WOLF POPULATION CAN KILL 10 TO 30 PERCENT OF AN UNGULATE POPULATION A YEAR, HOW LONG WILL IT TAKE A WOLF PACK TO CONSUME THE EXISTING UNGULATE POPULATION?

I REALIZE THE REQUIREMENTS OF THE ENDANGERED SPECIES ACT REQUIRES THAT WORK MUST PROCEED ON THE WOLF RECOVERY PLAN. THE MESSAGE THAT I WANT TO LEAVE THE SUBCOMMITTEE WITH IS, IDAHO IS AN AGRARIAN STATE. WE NEED ACCESS TO OUR LAND BASE IN ORDER TO SUSTAIN OUR COMMUNITIES AND TRADITIONAL LIFESTYLES. ANY WOLF RECOVERY PLAN MUST BE FORMULATED WITH THIS IN MIND AND THE FAILURE TO DO SO WILL ONLY PERPETUATE THE OPPOSITION TO THE WOLF RECOVERY PLAN.

THANK YOU FOR YOUR INDULGENCE.

Mr. STUDDS. Thank you very much, Larry.

At this point in the record, without objection, the statement of the gentleman from Wyoming, Mr. Cheney, will appear along with others who might want to submit a statement.

[The statements follow:]

STATEMENT OF HON. DICK CHENEY, A U.S. REPRESENTATIVE FROM WYOMING

Mr. Chairman, I am grateful for the opportunity to submit a statement for this hearing today. I am very interested in the issue of wolf reintroduction, because as you know, the state of Wyoming is one of the three places where the Northern Rocky Mountain Wolf Recovery Team proposes to place an experimental wolf population. The area chosen by the team covers not only Yellowstone National Park but also national forest land and wilderness areas around the park.

The 2.2 million acres of Yellowstone present a strong temptation to the wolf recovery effort. But I believe the inclusion of Yellowstone, indeed, the preoccupation with Yellowstone, seriously flaws the wolf recovery effort. I have nothing against wolf recovery, nor do I labor under the impression that wolves will run visitors out of the Park.

My primary concern is that we are still going through the anguish of helping the Yellowstone grizzly bear to recover. This is important work, and I fully support the effort. As everyone on this committee must know, the grizzly bear recovery plan was a hard won compromise that is sensitive work to administer. My colleagues from Wyoming in the Senate and I have worked closely with the bear recovery team on such issues as the campground at Fishing Bridge, access to grizzly bear habitat, relocating problem bears, and whether to provide supplemental food supplies for the bears.

In its early stages, the bear recovery work was nearly a house of cards: every report of a bear attack threatened to undo years of careful preparation. I am pleased to say that the bear recovery plan seems to be working. But it remains the source of debate and concern. The recovery plan is gaining public support, but it is still a sensitive and delicate issue, and it will never succeed without widespread public support.

Into this atmosphere charges the wolf recovery plan. Even before the grizzly bear work is done, Yellowstone is now asked to shoulder the wolf plan in addition. As we struggle to bring back the bear, we are asked to set aside more than 3,000 square miles of the Yellowstone area where all other wildlife management will be subordinate to the needs of the wolf. The recovery plan puts it clearly. In these Zone I areas, "Management decisions will favor the needs of the wolf when wolves or wolf habitat needs and other land use values compete." I am personally convinced that reintroduction of the wolf at this time, together with all of the restrictions accompanying it, will serve to inflame opposition to the whole notion of managing areas for endangered species, thereby jeopardizing the considerable progress we've made so far on the grizzly.

I am fascinated to note that the wolf recovery plan reads as though the bear recovery work did not exist. Perhaps I am not alone in my concern that the wolf recovery plan will greatly complicate the delicate job of restoring a healthy bear population to Yellowstone. The plan discusses the tasks of managing the wolf's contacts with humans and livestock. But there isn't a word devoted to the issue of grizzly bears.

The assumption implied in the wolf plan is that wolves will eat primarily elk, of which Yellowstone has a large population. But the plan says nothing about the moose. The May, 1986 issue of Natural History quotes Bob Stephenson, a wildlife biologist from the Alaska Fish and Game department, as saying that a healthy wolf population can kill from 10 to 30 percent of an ungulate population. More troubling is his statement that Alaska has places where the moose has virtually disappeared, and isn't coming back, because of wolves and grizzly bears.

There is the further question of why the wolf recovery plan concentrates solely on the lower 48 states. By leaving out Alaska, the team can avoid dealing with the estimated 4,000 to 6,500 wolves who live there. The logic behind this decision is elusive. The wolf recovery plan itself notes that some taxonomists make a distinction between the wolf in Canada and Alaska and what the plan describes as the Northern Rocky Mountain Wolf, Canis lupus irremotus. But the plan says the entire species was listed as endangered in 1978: "Thus, in this plan, NRMW refers to gray wolves in the northern Rocky Mountains of the contiguous 48 states, not to a specific subspecies."

In other words, the plan leaves Alaska out because there are plenty of wolves there, not because the wolf in Alaska is sufficiently different from the wolf in the Rockies. I realize it would make no sense to have a recovery plan for Alaskan wolves, whose numbers demonstrate that the wolf is in no need of recovery help there. But I question why the wolf is endangered when there are so many wolves in Alaska that the state Department of Fish and Game has a predator control program to deal with the wolf there.

I'm no wolf hater, Mr. Chairman. I have no doubt that Yellowstone offers many of the things that wolves need---a steady diet, areas to den, places to rest, and ample space in which to spread out. I am equally aware that wolves once lived in Yellowstone. There can be no doubt that a strong biological argument can be made that Yellowstone is worth considering for the wolf reintroduction. But the wolf plan cannot be considered in a vacuum.

STATEMENT OF HON. HANK BROWN, A U.S. REPRESENTATIVE FROM COLORADO

I appreciate the opportunity to submit a statement in support of the reauthorization of the Endangered Species Act, H.R. 1467. Protecting our nation's endangered species is important. Providing adequate guidelines for western states in their development of water resources is also important.

Western states are beginning to establish effective plans that not only provide for the protection of endangered species, as prescribed under the Endangered Species Act, but also guidelines which have enabled them to provide a safe and stable water supply.

Colorado, in cooperation with the Colorado Water Congress, has been working with the states of Utah, Wyoming, the Bureau of Reclamation, U.S. Fish and Wildlife Service, Western Area Power Administration, water development interests, and environmental organizations in the Upper Colorado River Basin. Similar efforts also are being pursued with Nebraska in the Platte River Basin. The goal of the group has been to develop an administrative approach that would protect endangered species while providing a continued approach to water development within state water law.

Recently, the group's efforts have led to the development of the proposal for the recovery of endangered species in the Upper Colorado River Basin. One of the major components of the proposed recovery of endangered fish species in the Upper Colorado River Basin is the establishment of a recovery implementation committee made up of representatives from Utah, Wyoming, Colorado, the federal government, and water development and environmental interests.

The recovery implementation program sets forth the means of identifying water flow needs for endangered species and the means for acquiring those flows pursuant to state law. The group's efforts in the Upper Colorado River Basin should be commended.

It is my understanding that specific funding mechanisms have been identified. This includes contributions from the federal government, the States of Wyoming, Colorado, and Utah power users and water users. The power users and the states are committed to contributing more than \$26 million for the implementation of the recovery plan. In addition, the group is seeking an additional \$10 million from the federal government to pay for the acquisition of water rights in the Upper Colorado River Basin, pursuant to state water law. The acquisition of water rights will assure flows are maintained in the river for the habitat needs of the endangered fish species. My hope is that the subcommittee will give careful consideration to the authorization which will support the Upper Colorado River Recovery Implementation Program for endangered species.

Colorado, Wyoming and Utah have come a long way in recognizing the need to cooperate with the broad spectrum of interests to achieve the goals established in the Endangered Species Act. With the reauthorization of the Act, western states can continue to make long range plans necessary to protect endangered species habitats as well as meeting its demands to provide an adequate water supply.

Losing our water rights is not only a potential tragedy for Colorado's economy, but an environmental danger as well. The vision and foresight of Colorado's pioneers helped change our plains from a brown, semi-arid desert to a bountiful productive green. If we are to enhance the beauty of Colorado, we must be no less farsighted.

Working together with the federal government, as prescribed in the Endangered Species Act, we will be able to meet our economic and environmental goals.

Thank you for your consideration.

STATEMENT OF HON. ALAN SIMPSON, A U.S. SENATOR FROM WYOMING

THE ENDANGERED SPECIES ACT WAS ORIGINALLY CREATED TO AFFORD ADDITIONAL PROTECTION TO SPECIES WHICH HAD SUFFERED POPULATION DECLINES. THE ORIGINAL INTENT OF THE ENDANGERED SPECIES ACT WAS, AND STILL IS, LAUDABLE. HOWEVER, SINCE THE ORIGINAL PASSAGE OF THE ENDANGERED SPECIES ACT, THERE HAVE BEEN SEVERAL INSTANCES WHERE THE SPIRIT OF THE LAW HAS BEEN ABUSED AND EFFORTS TO EFFECT PUBLIC LAND USE DECISIONS WHICH DO NOT DIRECTLY AFFECT A GIVEN THREATENED OR ENDANGERED SPECIES. IN ADDITION, CERTAIN JUDICIAL PROCEEDINGS HAVE RESULTED IN THE MISINTERPRETATION OF THE SPIRIT OF THE LAW. THESE COURT DECISIONS MAY ACTUALLY CAUSE HARM TO THE VERY SPECIES THEY SEEK TO PROTECT BY ALIENATING THE PUBLIC THAT MUST BE THE SOURCE OF SUPPORT FOR ENDANGERED SPECIES RECOVERY ACTIVITIES.

IN MY HOME STATE OF WYOMING WE HAVE HAD BOTH POSITIVE AND NEGATIVE EXPERIENCES WITH THE ENDANGERED SPECIES ACT. FOR INSTANCE, THE ENDANGERED SPECIES ACT HAS ASSISTED THE WYOMING GAME AND FISH DEPARTMENT IMMEASURABLY IN EFFORTS TO PRESERVE THE ENDANGERED BLACK-FOOTED FERRET. THE ENDANGERED SPECIES ACT HAS ALSO AIDED WILDLIFE MANAGERS IN PROTECTING LESSER KNOWN PLANT AND ANIMAL SPECIES IN WYOMING. HOWEVER, THE NEGATIVE EXPERIENCES WE HAVE HAD WITH THE ACT CAUSE US DEEP CONCERN AND I BELIEVE THE ACT MUST BE AMENDED IN ORDER TO CORRECT THE FLAWS WHICH HAVE COME TO LIGHT IN RECENT YEARS.

IT IS RELATIVELY EASY TO MANAGE ENDANGERED PLANT SPECIES OR SMALL ANIMAL SPECIES. IN THE ROCKY MOUNTAIN WEST WE HAVE AN ANIMAL SPECIES WHICH IS PARTICULARLY DIFFICULT TO MANAGE --URSUS ARCTOS HORRIBILIS -- THE GRIZZLY BEAR. LARGE PREDATORS, ESPECIALLY MAN EATERS, POSE UNIQUE PROBLEMS TO WILDLIFE MANAGERS. MY PERSONAL EXPERIENCE WITH GRIZZLY BEAR MANAGEMENT HAS REINFORCED THE IDEA THAT THE 8TH CIRCUIT COURT DECISION INVOLVED IN SIERRA CLUB V. CLARK MUST BE REVERSED IN ORDER THAT RESPONSIBLE WILDLIFE MANAGERS CAN EFFECTIVELY BRING ABOUT THE RECOVERY AND SUSTAINABILITY OF LOCAL GRIZZLY POPULATIONS. UNFORTUNATELY, TO SOME, THIS ISSUE HAS BECOME MORE SYMBOLIC THAN REAL. I HAVE OFTEN STATED THAT MUCH OF THE LEGISLATION WE ACT UPON IN CONGRESS IS A RESULT OF GUILT, FEAR, AND EMOTION. THIS IS ESPECIALLY TRUE WITH REGARD TO THE "TAKING" (I.E. TRAPPING AND KILLING) OF GRIZZLY BEARS AND WOLVES. MEMBERS OF THE SUBCOMMITTEE MUST INSURE THAT THEY APPROACH ENDANGERED SPECIES ISSUES WITH A FULL MEASURE OF REASON AND OBJECTIVITY IN ORDER THAT WILDLIFE MANAGERS CAN BE GIVEN ALL OF THE TOOLS THAT ARE NECESSARY TO EXERCISE THEIR STEWARDSHIP.

IN THE CASE OF SIERRA CLUB V. CLARK, THE COURT FAILED TO DIFFERENTIATE BETWEEN HUNTING FOR SPORT AND HUNTING FOR MANAGEMENT PURPOSES. IN ADDITION, THE COURT RULED THAT BEFORE THE TAKING OF A THREATENED ANIMAL CAN OCCUR, A DETERMINATION MUST BE MADE THAT POPULATION PRESSURES WITHIN THE ANIMAL'S ECOSYSTEM CANNOT OTHERWISE BE RELIEVED. THE COURT DID NOT RECOGNIZE THAT

HUNTING CAN BE AN ACT OF CONSERVATION. THEREFORE, CONGRESS MUST RECOGNIZE THAT HUNTING MAY ACTUALLY AID IN THE RECOVERY OF THE GRIZZLY BEAR.

THERE ARE THOSE WHO ARE OPPOSED TO ANY HUNTING IN GENERAL ... FOR VARIOUS REASONS. HOWEVER, A DISPASSIONATE ANALYSIS OF THE GRIZZLY BEAR SITUATION WILL SHOW THAT HUNTING CAN HELP RID A GIVEN ECOSYSTEM OF "PROBLEM BEARS" WHICH WOULD OTHERWISE COME INTO CONFLICT WITH HUMANS, RESULTING IN A FEDERAL AGENCY TAKING THE BEAR. HUNTING CAN ALSO CONTRIBUTE GREATLY TO GRIZZLY BEAR RECOVERY EFFORTS BY ENLARGING THE CONSTITUENCY FOR GRIZZLY BEAR RECOVERY ACTIVITIES. IF LOCAL CITIZENS ARE CONVINCED THAT FEDERAL REGULATIONS WILL NEVER PROVIDE FOR HUNTING OR GRIZZLY BEARS, THE RESULT IS ALIENATION OF MANY CITIZENS WHO WOULD OTHERWISE SUPPORT GRIZZLY BEAR RECOVERY EFFORTS. EXPERIENCE WITH GRIZZLY BEARS ON KODIAK ISLAND IN ALASKA REINFORCES THE IDEA THAT HUNTING, WHEN USED IN CONJUNCTION WITH OTHER CONSERVATION ACTIVITIES, CAN RESULT IN A SIGNIFICANT AND THRIVING GRIZZLY BEAR POPULATION. AT KODIAK ISLAND, GRIZZLY BEARS THAT ARE MOST LIKELY TO BE KILLED BY HUNTERS ARE THOSE THAT HAVE LOST THEIR FEAR OF HUMAN BEINGS. THE RESULT IS A CULLING OF PROBLEM AND POTENTIAL PROBLEM BEARS. THUS, WILDLIFE MANAGERS OBSERVE THAT FEWER BEAR/HUMAN CONFLICTS OCCUR WHERE THERE IS A HIGHLY REGULATED HUNTING SEASON. HUNTING OF GRIZZLY BEARS CANNOT OCCUR IN THE LOWER 48 STATES WITHOUT DETERMINING THE TOTAL MORTALITY IN A POPULATION PRIOR TO ISSUING OF YEARLY HUNTING REGULATIONS. IF YEARLY MORTALITY EXCEEDS A CERTAIN LEVEL, HUNTING WOULD OBVIOUSLY NOT BE ALLOWED.

SIERRA CLUB V. CLARK IS IMPORTANT TO CONSIDER FOR GRIZZLY BEAR MANAGEMENT AS WELL AS WOLF MANAGEMENT. IN THE ROCKY MOUNTAIN WEST THERE IS MUCH DISCUSSION ABOUT THE POTENTIAL FEDERAL REINTRODUCTION OF WOLVES INTO THE YELLOWSTONE ECOSYSTEM. THOSE OF US WHO HAVE HAD EXPERIENCE WITH WILDLIFE KNOW THAT ANIMALS HAVE NO CONCEPT OF ARTIFICIAL BOUNDARIES AND THAT IT IS LIKELY THAT WOLVES WILL MIGRATE OUTSIDE OF YELLOWSTONE PARK -- AND THAT'S WHEN THE PROBLEMS WILL BEGIN. WE MUST HAVE CHANGES TO THE ENDANGERED SPECIES ACT IN ORDER TO MANAGE THE WOLF EFFECTIVELY. IF CHANGES ARE NOT MADE IN THE ACT IT IS UNLIKELY THAT THE PUBLIC WOULD SUPPORT WOLF REINTRODUCTION EFFORTS AND IN THE LONG HAUL THIS WOULD ONLY BE TO THE DETRIMENT OF THE WOLF.

I STRONGLY URGE THE COMMITTEE TO CONSIDER AMENDING THE ENDANGERED SPECIES ACT THIS YEAR. IF CHANGES IN THE LAW ARE NOT FACILITATED I PREDICT THERE WILL BE DIFFICULTIES IN REAUTHORIZING THE ACT THIS YEAR. I VERY MUCH LOOK FORWARD TO WORKING WITH THE DISTINGUISHED MEMBERS OF THIS SUBCOMMITTEE IN THAT REGARD.

ANOTHER AREA WHICH CONCERNS ME GREATLY INVOLVES WESTERN WATER RIGHTS. WITH REGARD TO WATER ALLOCATION, THE ENDANGERED SPECIES ACT HAS WORKED WELL IN MOST INSTANCES DESPITE EFFORTS BY SOME TO DISTORT AND STRETCH ITS INTENT. IN THE WESTERN STATES WE FIND THAT THE MOST SERIOUS EFFECTS OF MISAPPLICATION OF THE ACT MAY INTERFERE WITH THE STATE'S BASIC RIGHT TO ALLOCATE WATER. WE MUST ENSURE THAT FEDERAL AND STATE AGENCIES ARE GIVEN A CHANCE

TO WORK COOPERATIVELY IN ORDER TO IRON OUT DIFFERENCES RELATING TO WATER RIGHTS AND SPECIES MANAGEMENT. I STRONGLY ENCOURAGE CONTINUED COOPERATION IN THE MANNER WE HAVE SEEN IN THE COLORADO AND PLATTE RIVER BASINS. I AM PARTICULARLY DISTURBED TO SEE DOWNSTREAM STATES "USE" AN ENDANGERED SPECIES TO TRY TO CARRY OUT THEIR OWN HIDDEN AGENDA WITH REGARD TO THE ALLOCATION OF THE WATER. IF WE ARE SERIOUS ABOUT PROTECTING ENDANGERED SPECIES, WE SHOULD NOT USE THEM AS PAWNS TO CARRY OUT A PREVIOUSLY FLAWED AGENDA IN LAND USE PLANNING OR WATER ALLOCATION.

I DO SINCERELY APPRECIATE THE OPPORTUNITY TO MAKE MY VIEWS KNOWN ON THIS IMPORTANT ENVIRONMENTAL ISSUE AND I THANK THE MEMBERS FOR THIS OPPORTUNITY.

Mr. STUDDS. Gentlemen, I appreciate your testimony. You have raised some questions both of a specific and a general nature that I think deserve our attention. My questions, I think, flowing from your testimony, are more for the witnesses who will follow than they are for you.

Are there members of the panel who wish to be recognized for questions?

Mr. CARPER. Mr. Chairman.

Mr. STUDDS. The gentleman from Delaware.

Mr. CARPER. I want to thank my colleagues for their appearance today.

You mentioned you thought some minor changes, Mr. Craig, were in order for the bill. I didn't hear the comments, the testimony of Mr. Marlenee or Mr. Stenholm. Just very briefly, what minor changes do we need to make?

Mr. CRAIG. My colleague, Tom, I think it is important to understand that when we know that a substantial number of a species exists and it is relatively safe and perpetuating itself, as we do in the case of the wolf—and I have cited those numbers in Alaska and in Canada and in Minnesota—it is not an endangered species. For example, in Idaho we once had wolves, not great numbers of wolves but substantial numbers of wolves. Man chose to live there, chose to use the grasslands for grazing cattle and sheep, to make his livelihood, to provide material and commerce for this Nation, not just for himself. And the wolf, by its nature, likes to eat sheep, likes to eat cattle, and man chose to lessen the number, not eliminate, but lessen the number to a manageable amount. Now this Congress and a great many Americans wish to change the terms. The question is: Is the wolf truly endangered? It may be endangered in Idaho, but it is not endangered in the continent.

That is the point. Where you have a limited number of species that may truly be endangered, I see a responsibility to attempt to preserve them, without question, and I don't argue that point. But we are talking about thriving wolf populations in other areas of the continent.

We have a similar conflict, Mr. Chairman, in the northern part of Idaho where caribou, because of human activity, chose to leave and go north into Canada. They haven't returned. And though there are thousands of head of caribou in Canada, we are spending millions of dollars trying to bring them back to Idaho. We are building corrals and locking caribou in and saying, "You're going to love it here," and then we open the gate and, guess what?—they go home to Canada, where they have resided for several generations.

We are costing our logging industry millions of dollars because we are saying we can no longer log in some areas because we've got to replace the caribou and we can't get them to stay.

Mr. Chairman, my colleague from New Jersey, I think that is ridiculous. That is the only way I can put it, because the species is not endangered, and this law ought to be able to reflect that in its simplest and clearest form. That's the point of it.

Mr. CARPER. Thank you.

Mr. MARLENEE. Mr. Chairman, if I may add something to that?

Mr. STUDDS. Certainly.

Mr. MARLENEE. If the committee would yield to the gentleman from Delaware. Two things very quickly. One, tighten the act up so that we don't have the opportunity for litigation. Litigation has caused delay after delay after delay in this country. Let the professional people make their evaluations and then let's go on about our business and not have the opportunity for delay after delay in the courts.

The other thing that I think needs to be changed is to allow the States more flexibility in dealing with the act, with carrying out the control of the populations within those States.

Mr. CRAIG. I would only add that we in the western States have excellent fish and game departments that have probably some of the finest talent in the country in the management of fish and wildlife and yet oftentimes are totally overruled in their ability to manage, because of the law.

Mr. STUDDS. The gentleman from Texas?

Mr. STENHOLM. In the case of the Concho water snake, what has defied my understanding of the interpretation of the law—and I think it's interpretation more than it is need in the corrected language in this—is what causes various individuals and groups who are concerned—and I put myself in that category—concerned about wildlife, et cetera, what causes them to completely overlook the fact that the first cousin of the Concho water snake in Texas, the Brazos water snake, is thriving. The same arguments were put forth that if dams were built on the Brazos River you were going to do things to the snake. The facts are he is thriving. And yet when you make the argument again on the Concho, you've got to go through and spend the thousands and thousands of dollars in order to prove something that cannot be proven.

Here, ridiculous is the term for it, because everyone agrees that there is some reasonable doubt whether the Concho water snake is going to survive because west Texas is dry. It doesn't have a whole lot of water, and when you have to spend literally hundreds of thousands of dollars to provide ripples, manmade ripples above the dam, in order that the snake can do the double backstroke or whatever he's got to do coming down the river, in order to provide this manmade environment that we're taking away when we build the dam in order that he can survive, west Texans have got a hard time understanding why, because when you put those manmade ripples in, one good ten-inch rain that comes every ten years is going to wash them out. It is difficult to do.

So what I am saying is that I think the intent of the law is good, but somehow you have this, when it gets down to the grass-roots level, you've got this interpretation that defies common sense, and I venture every member of this committee would have difficulty following some of what this water district has had to do, the millions of dollars now—it's approaching \$7 million they have had to spend of their money, not Federal money—in order to comply with somebody's creativity of interpretation of the law in order to, at best, increase the survivability of a snake by five to ten percent by everybody's admission.

Mr. STUDDS. Are there questions on the Republican side of this panel?

[No response.]

Mr. STUDDS. On the Democratic side?

Mr. THOMAS. Mr. Chairman.

Mr. STUDDS. The gentleman from Georgia.

Mr. THOMAS. Thank you, Mr. Chairman. I would just like to make a few comments here. I feel that I am good friends of all three members of this panel, and actually serve on committees with two of them. I guess it falls our fate from time to time to be somewhat in disagreement up here as Members of Congress.

But I just, not to take specific disagreement with any of your statements, but some things were raised I think we need to keep mindful of, and it seems to be always the situation, particularly when we talk about species of wild animals, whether endangered, threatened, or whatever, but oftentimes we wind up, as my good friend from Texas pointed out, trying to put a price tag on something like the Concho water snake where we're looking at a \$5 million alteration in a dam project to preserve the snake.

I don't think you can put a dollars-and-cents value on species of animals, and particularly when they reach the point of being threatened or endangered. That is the unfortunate tradeoff we wind up in. I think this has been partly alluded to by the other testimony where we talk about the economic impact on cattle ranchers and sheep farmers where they are raising stock in areas where we are trying to reintroduce the wolf.

I personally think that these species of animals have the same right to exist and survive as maybe even more so than the domesticated animals. I think we have to take this into consideration when we go into these areas because there is only a certain amount of habitat that the wolf can exist in. He is a wide-ranging predator, and he is a predator that oftentimes does come in conflict with man himself and certainly man's livestock and man's ownership of his property.

And so we have to realize there is just a certain amount of area in this country that is anywhere suitable or that holds any possibility where we can survive together and carry on livestock farming to some degree and live and still have the wolf and the grizzly bear as well.

So when we went back, in the act itself going back, I think, to 1977-1978, in the act, when we begin to talk about species and populations or certain portions of populations, we talk a lot about the wolf moving back from Canada into the United States, but it seemed to be the sense of the Congress, and I seemed to support this in the thrust of the act, that even though there might be an abundance of the population in some areas, that that should not preclude the possibility of maintaining the species in other areas. So if in certain areas they became endangered or they're threatened as far as existence, then we had to look at that as well.

I personally am not quite satisfied with the fact that there are plenty of wolves in Canada. I live in the lower 48 and I travel to the West and go there. I would like to think that there are parts of the country where we can find the grizzly and the wolf still thriving there. He is just a part of a chain. He is just a creature that is seeking to survive, and where we've talked about some of the bad aspects, we certainly all want to recognize that there are some beneficial aspects of having a healthy wolf population: culling animals

that are old and feeble, that is a proven role of the wolf, and also, as a predator of smaller species that can move out of balance in the absence of a predator as well.

So these were just some comments I wanted to make. I thought it very interesting. I go back to the days when we looked at the American alligator. I know there are no alligators in Idaho—I don't think there are. There might be a few down in Texas.

Mr. CRAIG. We will trade you some alligators for the wolves.

Mr. THOMAS. We have an abundance of them in Georgia, and a lot of us thought it was asinine to declare the alligator an endangered species. He's an extremely hardy animal. He will probably be around, to my way of thinking, long after we're gone from the face of the Earth. He has survived ever since the dinosaur.

But we did our part. I think we are going to reach a point here somewhere in the Southeast where we're going to have to look at the possibility of controlling the population. I think that has to be done. But we played our part and our role. We were willing to work with that intricate balance.

I would just leave to the members of this panel that although you have sort of unique problems of your own, that it is literally that, it is just a balancing act that we have got to carry on. Somehow I think we have got to find a way to find that balance and see that these species are preserved. I just don't think we have the right to come in and preempt the rights of a species of animal, plant, or fish, its right to exist on this planet. I think that is something we have to respect, and that is what we tried to do through the Endangered Species Act. Frankly, it is the only way we're going to do it, in my opinion.

I yield to my friend from Texas.

Mr. STENHOLM. The thing that you have stated, in fact, the board of directors of the Colorado River municipal water district have taken just the approach that you have suggested. They have, in their judgment, spent the monies involved.

My concern is with the threats that we hear from unnamed individuals that this is not going to be good enough, that the actual building of the dam is going to be stopped through litigation. At what point do you find the reason and the logic in order to move on and to try to do the things that the gentleman from Georgia said? That is my concern.

Mr. THOMAS. Well, let me just close off, if I might, Mr. Chairman, on one other comment. I think my time is probably expired.

I think I am pressed, as you are, often with the political aspects of these issues. And I will be frank, in my district that I come from, probably the sentiment runs contra to much of my concern about our wildlife species, in the final analysis.

But I think that that still has to let us all again realize that the politics might determine one thing, but we should listen and yield to the minds of the people who really know the facts, the biologists who study the species, the game management people who work with them, and try to yield to them rather than to oftentimes political pressure and economic pressure, because again if you go back and weigh and try to put a price tag on the species and you try to weigh them in dollars and cents or in pounds, we're going to lose. It has to be done with that thing in mind of preserving the species,

preserving the balance, and it's our job, as I see it, to weigh through that political pressure.

Here I am, I am preaching to the choir, three fellow members of the Congress out here who are under the same pressure that I am. But I think I would just like to leave you with those thoughts. We cannot let it come down to that dollars and cents or economic evaluation of the species. There is no way to put a price tag on it. We will lose on that one every time.

I thank the members of the panel for coming here today, and I hope this causes no rift in the good friendship I have enjoyed with the three of them by differing somewhat.

Mr. STUDDS. I thank the gentleman.

Are there any other questions of this panel?

[No response.]

Mr. STUDDS. If not, I just want to say in thanking you again that I am particularly struck by the suggestion of the gentleman from Montana that we change the act so as to preclude litigation. If you can figure out as a general proposition how to do that, I think it would expedite the life of all of us here. Perhaps we ought to simply put in a clause that prohibits litigation pursuant to this act. I think that would be worth a try sometimes, generally speaking.

But thank you. You have put, I think, a very human and very articulate face on some of the most contemporary of problems that flow from our attempt to live with the principles enunciated so well by the gentleman from Georgia.

Thank you, gentlemen.

We go now to the next panel and ask the five members of that panel take their places at the witness table.

We are now going to enforce strictly the five-minute rule out of sheer necessity. There is no human way we are going to get through the list of witnesses today without doing that. I just put both witnesses and the committee on notice that I shall uncharacteristically use this gavel at the end of five minutes on myself and everybody else as a matter of practicality. I apologize in advance for any rudeness or interruptions that may flow from that.

We will take the witnesses, if it is all right with you, in the order in which you appear on the witness list here. We will ask you to confine your oral remarks strictly to five minutes. Your written testimony will appear in full in the record. We will begin with Mr. Frank Dunkle, the director of the U.S. Fish and Wildlife Service.

Mr. Dunkle, welcome.

STATEMENT OF FRANK DUNKLE, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE

Mr. DUNKLE. Good morning, Mr. Chairman, and members of the committee. I am pleased to be here. I do have a statement that I have submitted. I will make a few remarks, and I would entertain questions at your request. I would keep it very short, as you have asked, Mr. Chairman.

The Fish and Wildlife Service is recommending the reenactment and reauthorization of the Endangered Species Act on a 4-year basis and essentially without amendments.

Mr. Chairman, that is my testimony. If you care to have questions?

[The prepared statement of Mr. Dunkle can be found at end of hearing.]

Mr. STUDDS. There is no precedent for this. [Laughter.]

Thank you, Mr. Dunkle. Bless you, in fact. I appreciate that.

Dr. William Evans, Assistant Administrator of NOAA for Fisheries, National Marine Fisheries Service.

Dr. Evans, welcome back.

STATEMENT OF WILLIAM EVANS, ASSISTANT ADMINISTRATOR OF NOAA FOR FISHERIES, NATIONAL MARINE FISHERIES SERVICE

Mr. EVANS. Thank you, Mr. Chairman. Members of the committee, I am afraid I am not going to be quite as short as Frank Dunkle, but I will try to keep it well within my 5 minutes.

Mr. STUDDS. He neglected to yield you his remaining 4½ minutes.

Mr. EVANS. I have also submitted full testimony for the record, and would like to summarize.

We also support the reauthorization of the Endangered Species Act. We believe that the Act is vital to the conservation of species of fish and wildlife and plants that are endangered or threatened with extinction, and that the Act so far has been very successful in accomplishing that goal.

At the present time, the National Marine Fisheries Service, has listed as endangered 21 species. We are reviewing the status of all species of river dolphins and other inshore coastal species which we believe may warrant listing under the Act. We are also closely looking at the status of northern fur seal, which is listed in CITES, and we have recently gone through the procedure of listing as depleted. We have received a petition to list the Chinese river dolphin and are currently reviewing this petition. We are working with the scientists from the People's Republic of China. We have also discussed the status of the Gulf of California harbor porpoise with Mexican officials. Our program is indeed an international program in terms of dealing with endangered species.

As far as recovery plans, we have seven plans in place. This is about 33 percent of those species we have listed. Recovery plans provide a means to coordinate recovery efforts of Federal, State, local, and private organizations. In addition to the plans for the Hawaiian monk seal and all the species of sea turtles, we are developing national plans for the humpback whale and the right whale.

Recovery teams for these whales will be appointed to provide advice and assistance in implementing the plans. This will be done in close cooperation with the Marine Mammal Commission, the IWC, and several environmental groups. We are also taking a number of recovery actions for the Hawaiian monk seal, including control of human activity. We have a head-start program which has increased pup survival rates from 10 percent to 90 percent, and we are also looking at population studies, habitat studies, and evaluation of habitat.

In the case of sea turtles, which you will hear a great deal more about this afternoon, we have a head-start program and have assisted in the development of a device to help reduce the mortality of turtles associated with trawling for shrimp, which is considered to be about 24 percent. Of the 17,000 shrimp boats fishing in U.S. waters, less than an estimated 400 have voluntarily started using the device, which can save, at least based on the estimates that we have, as many as 97 percent of the turtles encountered. Therefore, we have proposed regulations to increase the use of turtle excluder devices.

In terms of consultations on section 7, final regulations implementing amendments to section 7 were published last June. We are working with Federal agencies to explain these requirements and changes. A workshop is being held this month to accomplish that goal.

We will be discussing with interested coastal States the development of cooperative programs for managing listing species. We already have a stranded marine mammal recovery network which is very effective. We are developing recovery plan guidelines to focus our recovery program and are working on this with the Marine Mammal Commission.

We are undertaking a program to conduct a systematic review of marine species that may warrant listing under the Act. We will be cooperating with international agencies such as CITES and IUCN, as well as local organizations. We are working with the Fish and Wildlife Service to develop regulations to implement the Marine Mammal Protection Act and the Endangered Species Act amendment that provides for the incidental take of listed marine mammals.

A technical change to the Act may be appropriate to give the National Marine Fisheries Service the authority for issuing incidental take permits outside the three-mile territorial limit in the 200-mile EEZ, which is the area we are to manage.

The Act has been amended to provide flexibility in resolving conflicts. Other than the technical changes mentioned, no amendments to the act are needed. We believe it would be useful to reauthorize the Act for 4 years, as long as the funding levels that have been listed for fiscal year 1988 are not exceeded.

Thank you very much, Mr. Chairman, and I will entertain any questions you may have.

[The prepared statement of Mr. Evans can be found at end of hearing.]

Mr. STUDDS. Thank you very much, Dr. Evans.

Next we will hear from Mr. Bert Hawkins, the Administrator of the Animal and Plant Health Inspection Service, Department of Agriculture.

Mr. Hawkins.

STATEMENT OF BERT W. HAWKINS, ADMINISTRATOR, ANIMAL AND PLANT HEALTH INSPECTION SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. HAWKINS. Thank you very much, Mr. Chairman, and members of the committee. It is indeed a pleasure to appear before you

today to discuss the reauthorization of the Endangered Species Act. As Administrator of the Animal and Plant Health Inspection Service and as a long-time rancher and farmer, I have long known the importance of preserving endangered species and maintaining the balance of our ecosystem.

The Department of Agriculture, USDA, believes that the Endangered Species Act and the Convention on International Trade in Endangered Species are vital elements in preserving the world's many endangered and threatened species of plant life. The U.S. Government has long played a leading role in the developing of CITES and in encouraging other countries to improve their enforcement efforts. We are proud to be a part of this effort.

Members of the convention have congratulated the Department for having the most effective enforcement program for plants in the world. They have looked to the program conducted by the Department's Animal and Plant Health Inspection Service for ideas on how to improve the enforcement of CITES.

We began enforcing CITES under the implementing authority of the Endangered Species Act in 1978, through a well-trained force of plant protection professionals. We examine shipments of endangered species of plants that are imported into or offered for export from the United States, to ensure that they comply with the law. Shipments that do not comply are seized.

But before seizing these imported plants, we must determine that they have been taken from the wild. For even those certified to be artificially propagated, it is often very difficult to establish that plants from foreign countries have come from the wild. We must accept as valid the documentation of the certifying country in the absence of sufficient evidence to the contrary.

During calendar year 1986, APHIS examined 263 million imported plants. Of these, we had over 4,500,000 coming in in 2,925 shipments that were subject to the regulations under the Endangered Species Act. Between 9,000 and 10,000 of these plants coming in in 245 shipments were seized and placed in rescue centers because they were not in compliance with the law or the regulations.

In addition, we processed 3,000 shipments totaling 2,669,000 endangered species of plants for exportation. These figures have remained fairly constant over several years.

From the beginning of our enforcement efforts, we have worked closely with the Department of the Interior's Fish and Wildlife Service in the investigation of possible violation of CITES. Interior's authority to prosecute violations extends to interstate commerce, and before APHIS can become involved, we must have evidence that the violations are related to foreign commerce. Nevertheless, through our working relationship with the Fish and Wildlife Service, we continually cooperate informally to stop illegal importation and exportation of the protected plants.

Most violations of CITES arise from ignorance of the law, and in these cases forfeiture of the plants is usually sufficient penalty. The more serious or deliberate violations are subject to civil penalty or criminal prosecution.

Our Department's Office of Inspector General investigates violations of the act and CITES. The Office of the General Counsel litigates

gates administrative action by USDA and refers criminal cases to the Department of Justice.

We understand, Mr. Chairman, that you are introducing H.R. 1467, which would reauthorize the act, and that the Department of Commerce will transmit a draft reauthorizing the bill. We support reauthorization of the act, and at this time we have no recommendations for you or this committee on that.

Thank you, Mr. Chairman. We would be glad to answer any questions you may have.

Mr. STUDDS. Thank you, sir.

Next, Mr. David O'Neal, Deputy Director of the Bureau of Land Management.

Mr. O'Neal.

STATEMENT OF DAVID C. O'NEAL, DEPUTY DIRECTOR, BUREAU OF LAND MANAGEMENT

Mr. O'NEAL. Thank you, Mr. Chairman. I think I will follow the lead of my distinguished colleague Frank Dunkle of the Fish and Wildlife Service and say that I have submitted my testimony for the record. I have a summary statement that I could read, but I think, in the interest of time, I will just simply state that the Department of the Interior's position is to reauthorize the Endangered Species Act. The Bureau of Land Management is very proud of its program in regard to the enforcement and the management of the threatened and endangered species that come under our control. I would certainly be ready to answer any questions you might have of the bureau.

[The prepared statement of Mr. O'Neal can be found at end of hearing.]

Mr. STUDDS. We appreciate that very much. The Department of the Interior is going to get some kind of special award this morning if this keeps up.

Finally, Mr. George Leonard, associate chief of the U.S. Forest Service.

Mr. Leonard.

STATEMENT OF GEORGE LEONARD, ASSOCIATE CHIEF, U.S. FOREST SERVICE

Mr. LEONARD. Thank you, Mr. Chairman. Members of the committee, we appreciate the opportunity to present an overview of the Forest Service endangered species program and to address the specific questions raised by the subcommittee. We are proud of our management programs to maintain and enhance the habitats for threatened and endangered species. Wildlife habitat management was of major importance on the national forest system long before the Endangered Species Act was passed. However, the Endangered Species Act does provide important authorities and emphasis to this aspect of our wildlife program.

The Endangered Species Act requires the Forest Service to take no action to jeopardize a threatened or endangered species, and we take positive action towards the recovery of threatened and endangered species. Not only do we have an active management program, but our research and administrative studies continue to pro-

vide information and technology to improve our ability to manage and recover threatened and endangered species.

We are conducting habitat research on the red cockaded woodpecker and in numerous other species throughout the country. In addition, we have numerous past and ongoing administrative studies dealing with threatened, endangered, and sensitive plants and animals throughout the national forests. The emphasis within our habitat improvement programs for threatened and endangered species is being given to bald eagles, peregrine falcons, and grizzly bears.

Our implementation of the Endangered Species Act is coordinated with the requirements of the National Forest Management Act of 1976. The implementing regulations for that act require the Forest Service to manage fish and wildlife habitats so as to maintain viable populations of existing native and desired non-native vertebrate species. In most cases, we manage to provide habitat for a population level higher than the minimum viable numbers.

Section 7 of the Endangered Species Act directs all Federal agencies to utilize their authorities by carrying out programs for conservation of listed species. The Forest Service manages essential habitats of all listed species within the national forest system to help assure their protection. In addition, the Forest Service has participated and is participating in the development of recovery plans. Currently, emphasis is being placed on the management of habitats of 129 threatened or endangered species within the national forest system.

The committee has expressed interest in the category of species often referred to as "candidate species." Through the authority and intent of several laws, including the National Forest Management Act and the Endangered Species Act, we have developed a strong, sensitive species protection and management program. All of our field offices are kept apprised of this program through our Forest Service manual and Forest Service officials routinely review implementation to assure compliance.

Although the Endangered Species Act only covers those species that are listed, the Forest Service currently monitors candidate species through our sensitive species program, with emphasis on areas where planned activities may impact such species.

In addition, each forest land and resource management plan contains a section on monitoring fish and wildlife and plant species. As these plans are implemented, our monitoring efforts will increase.

We are concerned that populations might not thrive in small islands of habitat, as sometimes happened when small reserves are set aside. Most national forest system lands occur in large blocks, and we have a long history of managing those lands to protect all resources. The habitat diversity available under multiple-use management within the national forest system provides suitable habitat, for instance, for most of the animal species identified in the study entitled "Mammalian Richness, Colonization, and Extinction in Western North American National Parks."

Thank you for this opportunity to present some of our views and our perspectives concerning the Endangered Species Act.

[The prepared statement of Mr. Leonard can be found at end of hearing.]

Mr. STUDDS. Thank you very much, Mr. Leonard, and gentlemen.

Mr. Dunkle, did you have the opportunity to hear the three Members of Congress who began this morning's testimony?

Mr. DUNKLE. Yes, sir, I did.

Mr. STUDDS. You did. First of all, with respect to Mr. Marlenee and Mr. Craig and their concerns which they expressed at some length and with some conviction, as you heard, regarding to the re-introduction of the gray wolf in the Yellowstone, would you be so kind as to very briefly address some of those concerns specifically raised by those two Members of Congress?

Mr. DUNKLE. Yes, Mr. Chairman. We do have a recovery plan under way, pretty well determined after numerous public hearings. We have agreed to go over that recovery plan in detail with the delegations from the States that will have some problem, as they see it—Idaho, Montana, and Wyoming—so that they may see all of the approaches.

One of the specific issues of concern is that we do have a method for handling any wolf, individual or by pack, that gets into trouble. There have been problems in the Glacier area. We have not had to go through long periods of back and forth between the field, between Washington, and between the solicitors so that we are not sued, and I would say that we have in place a decision by the regional supervisor, the person on the scene, and any problem with a wolf through depredation or a public safety problem can be handled almost instantaneously. So that particular problem I think we can handle.

The recovery plan does not say we are going to introduce wolves. It says that if we were to take the next step, which would be recovery of a species which is considered endangered or threatened, these are the ways that we would consider doing it. We would have to put together then an implementation program for that plan and then move forward. I can assure you that it will be done under very precise methods, and that there would have to be agreement and acceptance by the States and by the major land agencies and major land owners before we would do anything. We would be careful that the wolves are wild wolves, and have not been imprinted by humans so that there would not be a problem. The plan is well thought-out. I think we would approach it with concern and understanding and not without concurrence of the people that would be affected.

Mr. STUDDS. The voice of optimism. How about the concerns of Congressman Stenholm of Texas? I am sure you heard his less than charitable characterization of your concerns about his snake. What is your response to what he had to say about that?

Mr. DUNKLE. Mr. Chairman, I do believe that that snake has been put to rest. [Laughter.]

Mr. STUDDS. The program is a failure, he said.

Mr. DUNKLE. And that the various groups are sitting down and working this out. I am talking about the water authority and the Fish and Wildlife Service both on the ground and, if you will, from the region and Washington. A plan has been put together. The re-

quirements and needs of the snake I think are being met as well as the needs and requirements of the people of west Texas.

We have submitted for the perusal of the committee a copy of the findings, the section 7 consultation and recommendations to the Corps. There is a memorandum of understanding being determined and agreed upon, even while we are meeting, between the district and ourselves.

We have taken into account the economic considerations, the conservation needs of the snake, and the needs of the people. I don't put them in that order for any reason, but that we have come to grips with it. We have found the solution. And, Mr. Chairman, there is nothing I can say nor is there anything that the district can do if someone chooses to sue anybody or bring about litigation over whether or not we did the right thing. We think we have met the needs of both the people and the species in a proper, legitimate, honorable way, and if there are those who would take us to court, I guess to court we will go.

Mr. STUDDS. You have a wonderfully cheerful view of the world this morning. I don't know why.

Mr. DUNKLE. I was looking forward to this meeting, sir. [Laughter.]

Mr. STUDDS. I can appreciate that, and I can see what is in your lapel. [Laughter.]

Dr. Evans, Fish and Wildlife has listed over 900 species as endangered or threatened and has developed plans for the recovery of over 300 of those species. I think you made reference to it, but I missed it. How many species have been listed by NMFS?

Mr. EVANS. Twenty-one, sir.

Mr. STUDDS. Twenty-one. And how many recovery plans have been developed?

Mr. EVANS. At the present time we have seven recovery plans in place.

Mr. STUDDS. Seven. Now, I know that Fish and Wildlife obviously has a substantially larger budget and effort directed in this direction, for clear reasons, but those relative figures—should they be a source of concern to us? Do you need more resources? What is happening?

Mr. EVANS. No, sir, I don't think they should be a source of concern. We have, I think, some special problems. Our colleagues in Fish and Wildlife Service certainly would agree that the species that they have that also spend a large percentage of their time in water or under water are a little bit more difficult to deal with in terms of determining their status. All the species we deal with are spending all of their time under water or a very large percentage of their time under water.

I have, since September when I came aboard, made an attempt to try to improve this, and we have increased our effort in this direction. I think that with the two whale species that we are working on right now in terms of putting recovery plans in place, we are looking very closely at at least three or four other species that we will have on line very quickly.

I agree that in the past that maybe not as much emphasis has been put on this very, very important process of the Endangered Species Act, and we are taking steps to remedy that, sir.

Mr. STUDDS. I have been informed quite straightforwardly by my staff that my time has expired. Let me just ask you, the two whales to which you referred, are those the right and humpback whales?

Mr. EVANS. Yes, sir.

Mr. STUDDS. Excellent. Thank you.

The gentleman from Virginia.

Mr. BATEMAN. Thank you, Mr. Chairman.

This member, as I suspect is the case with all members of the committee, is happy to hear that there is essentially unanimity that the act ought to be reauthorized. I am curious, though, about what seems to be a position that the act is perfect and needs no fine-tuning of any kind. I take that to mean that even in the context of the concerns broached by the gentlemen from Texas, Montana, and Idaho that you really don't need any amendment in order to rationally deal with the kind of problems that they have focused upon.

Am I correct that none of you perceives the need for any amendment or fine-tuning at all?

Mr. EVANS. Mr. Bateman.

Mr. BATEMAN. Yes?

Mr. EVANS. We did mention in our testimony and in the full testimony that we believe that there may be some technical changes that would assist in giving a little bit more flexibility in dealing with situations such as in our case where we have incidental take associated with commercial fisheries and even in some cases recreational fisheries. Other than that, we see no need for major changes.

Mr. O'NEAL. Yes, sir, if I might. One of the concerns that I see in talking with people especially out West, and it was brought up by the bureau's advisory council, is the delisting procedure. Now, we are working very closely with the Fish and Wildlife Service, and I know as the plan is developed on a listed species, that the delisting is included in that plan.

The perception, however, that causes a lot of people to oppose the listing—and oppose the listing emotionally—is that they feel that once it's listed, it is very, very difficult to have it delisted once it has survived or has come back.

Perhaps the committee would like to look at a way to focus on the delisting so as to eliminate that perceived threat. That might be a big help in the listing process and the way it's perceived.

Mr. BATEMAN. Do you find no concern in terms of the act as it is presently written and proposed to be reauthorized, along the lines of the point made by the members who preceded you, that a species which is not endangered except in a species not endangered in gross need not be protected in areas where it is a predator and presents social problems or economic problems? Does the act force us in a direction of preserving the species everywhere that it has previously existed and may now be endangered if there are several other areas where it exists and is thriving? Don't we have to meet that question as a policy question, and does the act meet it in a balanced, cogent way?

Mr. DUNKLE. Mr. Congressman, I think you had two questions there. The first is: do any of us here—and I would then answer for the Fish and Wildlife Service—feel that there are no need to

change the act? I don't think there is need to change it. I think we need to have it in place for a given period of time, and let us really find out what the problems are. As it has been, every two years there is a problem every time it comes up for the reauthorization and then the big fight starts or somebody determines they will put a hold on this act. So there we are putting bandaids on.

So under a 4-year or some opportunity to trace it clear through, I think we can find if there are weak points or strong points or other ways to address that act. That is why we are recommending we set it for a longer period of time, let us work with what we have, and see if there is really flexibility and better ways to handle what we have. It's a well-written act, it's written in detail, and we have to then determine how we will use it.

If there is any place that needs to be more carefully considered, it is the regulations. The act itself is something that I think sound thinking can handle. The regulations are very strict, and we have to find out what we have to do with those. And I think by carefully looking at the regulations, we might solve a lot of our problems.

It only took us 4 years to change the regulations. If you need to look at something, it is to tell us to move more quickly when we see a problem with the regulations and to correct it without 4 years of legal back and forth as to what we should do with it. So I separate that question in that way, sir.

Your other question was: should we take a species that is seemingly in good shape in some other part of the Nation or the world or the continent and go ahead and try to establish or to keep it as endangered in another place; that is, Canada, and then putting a population into the United States, namely, Montana, Idaho, or Wyoming?

It has been the recommendation of a number of people that the gray wolf was a recognized part of the ecosystem in the United States. One of the areas of large public land holdings is in the Idaho-Wyoming-Montana area, and there the gray wolf was a real and accepted part of that ecosystem.

There are those people who would like to see us establish a population back into that area. We have tried to address that kind of thinking, but also to address the idea that if we do establish a species that seems to be doing well somewhere else that once was an inhabitant of another area, that we should do so in close consultation and with understanding of the uses of that area now and the requirements, needs, and desires of the people in the area.

We are far from putting a wolf into the Yellowstone ecosystem, and the folks there are far from allowing us to at this point. I think it has to be done with discretion and understanding. So I would say that the species is endangered and/or threatened, and we are looking at that area in the United States as a possible location for reintroduction of a species that was once there, I guess I am not discussing whether or not we should or shouldn't keep it listed as endangered, because it is not threatened or endangered in another area. We are talking about putting it back into an area where it once was.

So that would be in the wisdom of Congress to determine whether or not we should follow the recommendations of the members of

the recovery team, and I would not intrude into that area of jurisdiction.

Mr. STUDDS. The time of the gentleman has expired.

Mr. BATEMAN. Mr. Chairman, might I just comment that apparently there have been no volunteers for the restoration of the wolf in other areas.

Mr. DUNKLE. Mr. Chairman, I would only perhaps rephrase that in that it depends on which side you're on as to whether there are volunteers. Those who want them are volunteering, and those who would get them are not.

Mr. STUDDS. I thank the gentleman for his questions.

The gentleman from Georgia.

Mr. THOMAS. Mr. Dunkle, it has always been perplexing to me as to how the wolf and the coyote, being somewhat similar as predators—and I know the difference is that probably the wolf is about two to three times as heavy as the coyote or the red wolf, the Plains wolf I think you sometimes refer to it as—but they have been extremely successful. In fact, we've got a real problem, believe it or not, in the State of Georgia, where coyotes were introduced a few years ago, best as the rumor carries it, by a group that had hunted out all of the fox in that area and brought in some coyotes. And now they're all over the State.

I have great concern about that type predator suddenly introduced into an area where the wildlife has not adjusted to it over a period of time, and I am seriously concerned about it.

But what is the problem here all of a sudden, the great fear? Is a wolf that much different from a coyote? Is he a real threat to human beings? Is it an economic threat? Is it the threat that some feel that he will get the other game species out of kilter? In your opinion, if you don't mind, for the edification of this panel and those in this room, what do you think is the real concern and fear out there about the wolf?

Mr. DUNKLE. Mr. Chairman, maybe I can address that question in one way. Yes, the wolf and the coyote are different. They are members of the dog family, of course, but size is different. I think most predators will eat anything that comes by; they are opportunistic feeders. But the wolf does tend to take the larger animals. He kills in a fairly characteristic way. A wolf pack—that is, more than one wolf, a pack ranging up to 8 to 12—will take considerable numbers of large animals. And so part of the problem then is that psychologically in the West we have accustomed ourselves to doing away with any competition to the livestock business.

Mr. THOMAS. Can I stop you there just one minute? Isn't that really what we're getting at: the psychological problems with the wolf?

Mr. DUNKLE. Yes, sir. I said I was going to sum it up in one area. And we started with Goldilocks, who got eaten by that sucker, and we've progressed from there, and so all wolves are bad as we have been taught. Thus, wolves take livestock, and we so we reduce them.

As we moved into a hunter or sportsman era, the predator was seen as an adversary to the hunter who wanted those populations of game animals for a sport hunt, and then anything that a coyote, a wolf, a grizzly bear, or others took was then taking from the hun-

ter's bag. So you have that sort of thing that will be developing. And the panel brought that out this morning.

So we will have several conflicts. But basically we are a Nation that has told ourselves that predation is bad and it takes away from us, and that is what it is based on. We are introducing a large carnivore into an area where we have in the past carefully tried to eliminate it, as was brought out by the panel, and folks are just not ready to jump up and say, "Isn't this wonderful to bring him back."

There are, you know, few, if any, real documented cases of wolves eating up people on an established basis. In the case of grizzly bear, that is not true; they are a little more aggressive. Any wild animal, I think, given an opportunity, will take the easiest meal, and I was down in Florida looking at alligators, and they tell me they like dogs and I have a dog that they could have. [Laughter.]

Mr. THOMAS. Particularly Labrador retrievers. [Laughter.]

Mr. DUNKLE. I have an English sheep dog that they could have. [Laughter.]

And after seeing some of those alligators, I understand just one bite will do you in. But they will take something of a given size, and although I think wolves are opportunistic, too, we don't have any valid information that they will be a real problem for people walking down the trail or down the road.

Mr. THOMAS. Well, I think you're getting to the point that I was trying to make, that I am very discouraged about the psychological fixation we have about wolves. Russia has literally obliterated them and their world because of their hatred, absolute outright hatred of the wolf. Of course, we know the part it has played in the history of the Russian people. But certainly, in this country, where we are more enlightened and we look at things on a more practical basis, I hope we can overcome that.

The truth of the matter is, even if you look at the grizzly bear, we should appreciate if he were a bear that was not dangerous to people, if he were not an opportunistic carnivore—of course, we know he eats lots of fruits and berries and other things—but if it weren't for his very nature and that fierceness about the bear and the fact that he is not some pet that rolls over on his back and purrs when he is approached by human beings, then he wouldn't be a grizzly bear and there wouldn't be any reason to have him around.

We could have plenty of black bears; they seem to do real well. But we need to realize in this country if we are going to preserve some of these predators and these animals like this that don't mix real well with human beings, that is the very unique nature about them and that is why we ought, in my opinion, to try to encourage this. So I continue to be concerned about the psychological problems we have.

I can't see the light. Has my time expired, Mr. Chairman? I get the signal that it has. But could I just indulge the panel for one other question? I wanted to go to Mr. Evans.

Mr. STUDDS. Briefly.

Mr. THOMAS. Mr. Evans, do you think that we should and that we can come up with a turtle excluding device that is practical,

that will not put our shrimpers and fishermen out of business, and that will effectively exclude turtles, aiding in our effort to preserve the sea turtle for all time to come? Simple question.

Mr. EVANS. Thank you. In answer to your simple question, there will be a very complex answer this afternoon on the panel. But basically, yes, sir, I believe that we can. There are four devices currently available. The tests that have been done have demonstrated that these devices definitely are effective in excluding turtles. They have been tested in some areas.

There are some questions in terms of whether different habitats may have some different effects. We do have some plans to look at various permutations of this by looking at different kinds of bottoms, different depths, and different areas. There have been continued improvements over the past several years in the development of the device. We are continuing to look at ideas both from the fishermen as well as from some of our gear technicians, concepts and ideas that will improve this device.

There, I know, is a lot of controversy in terms of the fact that there is a loss of shrimp from the device.

Mr. THOMAS. Is that the case in all of these devices? Do you maintain that any TED that you pull—and I know I am a little premature, but unfortunately we have a very large St. Patrick's Day celebration in my home port of Savannah that I have got to get to this afternoon. So I just wanted to hear your comments in case I missed them.

But is that the case? Do the TED's literally inevitably and invariably lead to reduced shrimp catch?

Mr. EVANS. No, sir. The tests that we have conducted, the losses have varied from essentially zero to in some cases larger amounts. A lot of it has to do with size of the mesh and the size of the shrimp and a variety of other things. It is a very complicated issue. But we certainly, if you look at my testimony, you will find a little bit more detailed information and also more detailed information in Mr. Douglas' testimony which he will give this afternoon.

Mr. THOMAS. Thank you, Mr. Evans.

Mr. Chairman, thank you for the indulgence.

Mr. STUDDS. I thank the gentleman for his contribution.

The gentleman from Washington.

Mr. MILLER. Yes, thank you, Mr. Chairman.

Getting back to changes in the act, of course, the previous panel alluded to some changes, but there have been changes suggested in the other direction. In the written testimony that we have gotten, Mr. Bean of the Environmental Defense Fund and Mr. Fitzgerald of the Defenders of Wildlife have suggested that a civil cause of action, something like that created by Superfund, where a citizen could recover damages from injuries to endangered species that result from violations of the act, and there are other proposals that create causes of action when there is malicious destruction of endangered plants, whether they be on private property or public property.

I would be interested in any of the panel members' reactions to these proposals for changes in the act that would create additional legal rights or possibilities for litigation.

Mr. DUNKLE. Mr. Chairman, I would mention that my suggestion from our Service is that we allow it to go on for a period of time, at least 4 years, and that there be no amendments, my suggestion is, from either side, because you start tinkering one way, you have to tinker the other. I would recommend that we move forward with the way it is, see if it is not flexible, if it will not work, if we cannot handle it by regulation.

Mr. HAWKINS. I would have to concur, sir, in that we do have a good working relationship with the Fish and Wildlife Service in this area. We do have some minor problems, but we do overcome those. And given a certain amount of time, I think that we will solve what small problems we have or would come back to this committee for some suggested changes.

Mr. MILLER. Thank you.

Thank you, Mr. Chairman.

Mr. STUDDS. I thank the gentleman.

The gentleman from New Jersey.

Mr. HUGHES. Thank you, Mr. Chairman.

I too would like to welcome the members of the panel.

A number of years ago one of the difficulties that the committee had was in attempting to develop a consultation process that would work. I suppose my question would be directed to you, Mr. Dunkle. It would seem that the formal and informal consultation process has been working rather effectively. Am I correct?

Mr. DUNKLE. Mr. Chairman, yes, it has been. We have worked at it. If we took a very strict attitude that you're going to do it our way and we know what's good for you, it wouldn't work very well. But when we sat down and looked at the problem, walked around it, and did so in a cooperative manner, we have found that there are ways to address the problem of making certain that the species is protected and offered the chance to be there and to go ahead as well as, in most cases, to allow for the kind of development, sometimes with modifications, to go ahead.

There are times when you must say, "I'm sorry, it isn't going to work," and we do have to then follow the law and opt in favor of the species.

But for the most part, I think, we have developed a cooperative working relationship with the section 7 consultation approach that is working. I think we can do better, and I think we will.

Mr. HUGHES. Thank you. I have a couple of other administrative questions. Do agencies follow up after an activity has been approved to determine whether or not the species is recovering?

Mr. DUNKLE. Mr. Chairman, yes, we do. I think that as we do, we have found very little to go back and say you're not doing it. I am very pleased with what I see of our follow-ups, and some of them where we have tried to come up with some better, more cooperative approaches, we haven't had the opportunity to see their final form. But following up is part of the consultation in section 7.

Mr. HUGHES. Do you do that routinely, that follow-up?

Mr. DUNKLE. I don't know what routine would be, Mr. Congressman, but—

Mr. HUGHES. The reason I am asking is that the National Wildlife Federation will be testifying, and one of the, I think, constructive criticisms they make is that that hasn't been done routinely,

that there have not been basically post-opinion and post-construction surveys to ensure that the species really has survived and is doing well.

Mr. DUNKLE. I guess I would say that we do not have a definitive follow-up one-two-three. I think the point is well taken, and I for one will ask that we come up with some kind of justification for saying we do or we do not.

Mr. HUGHES. Finally, is it true that the average time between the listing of a species and the approval time, not implementation of its recovery, takes about 3 years?

Mr. DUNKLE. Mr. Chairman, yes, that is about correct.

Mr. HUGHES. How can we improve that process?

Mr. DUNKLE. Improve lessening the time?

Mr. HUGHES. How can we expedite it? Three years seems like a long time.

Mr. DUNKLE. Well, as you have heard here, there are people who are concerned about both listing and delisting. And delisting is the reverse of listing. It is, in fact, a from 10-to-1, where it used to be when you list, it's 1-to-10, you delist 10-to-1. I am going down 9, 10, and so forth.

My point is that we also very carefully review biologically the needs of that animal, its situation, and there is a very strict set of guidelines that we follow. And I think there are those who say it's endangered by your view or somebody else's, thus it's endangered. We are trying to approach it in a very scientific and thoughtful manner, and I think it puts people more at ease who are concerned that we are getting arbitrary and someone says, "Gee whiz, this species is in trouble, so list it." We are trying to protect against misuse of the listing of species as well as looking forward to the protection of that species.

If there is a species in trouble, the Secretary can sign an emergency listing, and there it is. Once we begin the process, we have a 90-day period. We look at it. If it appears that we should go ahead, then it becomes a candidate and it receives a certain measure of protection. And if there is a project or something to change its situation, that candidate species can be emergency listed and then is given the same protection and same consideration as a listed species.

So I think I would rather plead with you to allow us to approach it in a very biological and businesslike way, even if it takes three years, so that we do it properly. In the case of emergency, we can handle it.

I guess the thing I would say is that while we list, we should also know as we do it, thoughtfully and carefully, the needs of that animal, the problems that it has faced—or that species, so I don't say "animal" or "plant"—we should be thinking of recovery plans to go with that because the whole thing built around the act is that you shall list to protect but that you shall begin to try to recover. The ultimate goal of the Endangered Species Act is not to list and save a whole bunch of animals, but to protect them and recover them. So recovery is as important as listing, and I think we should be thinking about as we list, how do we recover? And I think that will bring about a much more thoughtful approach to the act than present.

Mr. HUGHES. Mr. Chairman, I know my time is up, but I have just one additional follow-up, if I might.

Mr. STUDDS. A last question.

Mr. HUGHES. Is it partly a resource problem?

Mr. DUNKLE. I am sorry?

Mr. HUGHES. Is it partly a resource problem? I have some data that would suggest that in fiscal year 1986, 56 percent of the Service's recovery dollars were allocated to less than 4 percent of the species listed.

Mr. DUNKLE. Do you mean the resources of people, money, and time?

Mr. HUGHES. Yes.

Mr. DUNKLE. Oh. We listed over 50 species, and that is moving right along. And if you want to put it on that basis, if the committee felt so inclined, if you want to put it on a basis of dollars, roughly a thousand dollars will list a species—I am sorry, a hundred thousand dollars will list a species. So if you want us to list 300 species a year, then you would add on the basis of a hundred thousand dollars a species.

Mr. HUGHES. Well, that is a fair gauge, about a hundred thousand dollars a species?

Mr. DUNKLE. I am sorry I misspoke. A hundred thousand. I am sure some of the staff are sitting there saying why not go for two. But a hundred thousand is about what we figure.

Mr. HUGHES. On the average?

Mr. DUNKLE. Yes, sir.

Mr. HUGHES. OK. Thank you very much.

Thank you, Mr. Chairman.

Mr. STUDDS. Thank you.

Let me, while you are still here, get in one question for the record if I may, for Mr. O'Neal of the Bureau of Land Management.

In his prepared testimony Mr. Bean, of the Environmental Defense Fund, points out, and I am quoting from it briefly, "Several species have gone extinct after being identified as candidates for future listing." He adds that, "Federal agencies must make more effective use of their authorities to assist in the monitoring and protection of candidate species." He notes that, "BLM could make expanded use of its authority to designate areas of critical environmental concern to protect both listed and candidate species."

I understand that in the California desert and in the State of Oregon, BLM has made extensive use of its authority to protect listed and candidate species by designating areas of critical environmental concern. In other States, however, like Arizona, Montana, Utah, and Nevada, where there are substantial numbers of listed and candidate species on BLM land, there has been virtually no use of that authority.

Why has the use of that authority been limited to such a relatively few States?

Mr. O'NEAL. Mr. Chairman, the ACEC or area of critical environmental concern is a tool of a land use manager. It is one of many tools; it is not the only tool. There are States that include those kind of planning efforts in their resource management plans. They feel they don't need an ACEC or they may have a habitat manage-

ment plan. So the ACEC, of which we have over 200 in the bureau covering—I am not sure of the acreage—but millions of acres over nine States, is well used.

There are managers, however, like Mr. Bibbes, our State Director in Arizona, who use resource management plans and habitat management plans and other tools in lieu of an ACEC. So it's not that the ACEC is the only way to go about planning to take care of a special management concern of an area.

Mr. STUDDS. Thank you.

The gentleman from New York, did you wish to ask any other questions of this panel?

[No response.]

Mr. STUDDS. If not, we thank you very much for your patience.

We will go on to begin with panel three. I just want to note that there is a chance that we will be interrupted by a roll call shortly after noon. I hope not. In the event that that happens, I think that my inclination would be to suspend until 1:30. But let's proceed as far as we can go with the next panel.

Thank you very much, gentlemen. I appreciate it.

While panel three is taking its place, there remain extra chairs up here at the lower level of the horseshoe if anybody wishes to sit down.

[Pause.]

Mr. STUDDS. We would appreciate it if we could get going here.

Gentlemen, again I apologize for the uncertainty of the legislative schedule here. We will go as far as we can in an effort at least to get your testimony on record if not to the questions at this point. We will proceed in the order in which you appear on the witness list, and as before, I will ask that you confine your oral statement to no more than 5 minutes, and your written statements will appear in the record in full.

We begin with Mr. Michael Bean, of the Environmental Defense Fund.

Mr. Bean.

STATEMENT OF MICHAEL J. BEAN, CHAIRMAN, WILDLIFE PROGRAM, ENVIRONMENTAL DEFENSE FUND

Mr. BEAN. Thank you very much, Mr. Chairman.

If one needed evidence of the tendency of human beings to exaggerate the threats posed by wolves and other predators, one would only have to point to the preceding panel. At least that is how I understand Mr. Dunkle's apparently Freudian slip in which even Goldilocks is eaten by a wolf. As anyone who has small children, as I have, knows, Goldilocks was not eaten by a wolf. In fact, what she did was to mess up the beds, break the chairs, and steal the food of some law-abiding bears after breaking and entering into their home. [Laughter.]

Mr. STUDDS. You are dealing with a Federal agency, Mr. Bean. [Laughter.]

Mr. BEAN. That's right. On a more serious note, I would like to tell you and the members of this committee what the real implications would be of a suggestion made by Mr. Craig and Mr. Stenholm this morning. They recommended amending this law to elimi-

nate protection for populations or subspecies of a species that is otherwise abundant or common elsewhere. If you were to do that in order to accommodate their concerns about the Concho water snake and the wolf, what you would end up doing is eliminating all the protection that this act provides for bald eagles, all the protection that this act provides for California sea otters, all the protection this act provides for peregrine falcons, and all the protection this act provides for brown pelicans in California.

The reason for that is those are either subspecies or species that are abundant or common elsewhere. Certainly, the bald eagle, like the wolf, is common in Canada and Alaska, but still endangered or threatened in the lower 48 states, including the States of every one of you represented here this morning.

Protecting the bald eagle has been a major objective under this act, and considerable success has been achieved thus far. Were you to accept the recommendation the gentlemen made this morning, the act would provide no protection for the bald eagle.

I want to address one amendment that we do think is desirable, an amendment that constitutes a refinement of the act's provisions currently. It has to do with the very limited scope of protection that the act provides for plants. Currently, the only prohibition the act provides for endangered plants is the prohibition against removing them from Federal lands. With respect to animals, of course, there is a much broader prohibition against killing or collecting them wherever they occur. But for plants, only those plants that occur on Federal lands are protected.

Our amendment would extend to plants the following additional protection. We would make it illegal under this act to collect, dig up, cut, or otherwise destroy a listed plant on non-Federal lands where doing so is already contrary to State law or where doing so is committed in the course of a trespass. That would not change in the slightest the existing legal duties applicable to anyone. It would not, as was suggested in a question earlier this morning, create any new legal obligation or any new cause of action.

What it would do is to provide the penalties under this act to deter those sorts of actions and substantially increase thereby the protection that the act affords to plants.

We have also suggested that the Fish and Wildlife Service be given concurrent enforcement authority with the Animal and Plant Health Inspection Service of the Agriculture Department over importation and exportation of plants. Currently, only APHIS has that authority. By giving the Fish and Wildlife Service concurrent authority with APHIS, we think there will be a much better job done of providing the sort of protection that plants need. That also would not create any new legal obligations; it would not create any new causes of action. It would simply make this act better enforced and indeed more enforceable.

We have also suggested, sir, that there be protection of a very limited sort provided for the many candidate species that are awaiting listing action. As this committee has heard in previous hearings, many of those candidate species have declined dramatically, some to the point of extinction, while on the candidate list. We would suggest that the act ought to require the Secretaries in-

volved to monitor the status of those candidates so that they do not go extinct or decline seriously while they are on the candidate list.

Finally, sir, I think if one needed to pinpoint the one part of this act that is most in need of additional resources, it is section 6, under which the Federal Government assists the States in carrying out State endangered species programs by providing shared financial assistance for those States.

In every one of your States the amount of funds currently being provided pursuant to section 6 falls woefully short of what is needed in those States. For example, in Mr. Thomas' State, Georgia, only \$31,000 was provided in fiscal year 1986 pursuant to section 6. That is the lowest it has ever been in the nine years that the State of Georgia has had a cooperative agreement with the Fish and Wildlife Service. Indeed, it is less than a tenth of the level in 1979, and it provided support for only 4 of the 23 listed species in that State.

In California, in fiscal year 1986 the Government was able to furnish only about a third of the State's request under section 6, and indeed federal support has steadily declined since 1981. That is true in State after State. It is true in New York. It is true in your own State of Massachusetts, Mr. Chairman.

I think there is opportunity to be gained through section 6 in forging a more effective cooperative relationship between the Federal Government and the States. The way to do that, frankly, is to increase substantially the level of authorized funding and appropriated funds pursuant to section 6, so that many States which now receive nothing or nearly nothing can rely on a substantially increased level of support that will enable them to carry out programs that are much more effective for their States.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Bean can be found at end of hearing.]

Mr. STUDDS. Staff has reminded me—and staff, as you know, are sticklers for fairness and accuracy—that your defense of the three bears is touching and will be reflected in the record. But they point out it will be very little consolation to Little Red Riding Hood's grandmother. [Laughter.]

There is also some discussion going on behind me, you will be appalled to know, about whether or not under the act the Three Little Pigs would have to be prosecuted. [Laughter.]

So there is a moral to this, but I leave it to future witnesses to describe.

Mr. BEAN. I have no doubt the Fish and Wildlife Service would use its discretion not to prosecute the Three Little Pigs.

Mr. STUDDS. One would hope so. [Laughter.]

Mr. John Fitzgerald, Defenders of Wildlife.

Mr. Fitzgerald.

STATEMENT OF JOHN FITZGERALD, WASHINGTON REPRESENTATIVE, ENDANGERED SPECIES PROGRAM, DEFENDERS OF WILDLIFE

Mr. FITZGERALD. Thank you, Mr. Chairman.

People often think that the process of protecting endangered species is one of doom and gloom, and I would like to point out that it was due to the leadership of this committee, particularly the chairman, Mr. Walter Jones, that the red wolf will be reintroduced into the wild—this year—at the Alligator River National Wildlife Refuge where the Service hopes, and we all hope, that its reintroduction will succeed.

Mr. Jones has had this occur in his own district. The people have welcomed the reintroduction of the red wolves. So if the Act is properly applied, we find that it is a signal for hope, a set of tools for hope, and not just a circumstance where we have one interest pitted against another.

We would hope to encourage that with greater resources devoted to the recovery activity as well as each of the other main activities of the Fish and Wildlife Service and NMFS and the other agencies responsible. In our written testimony and Supplementary Analysis, we have outlined detailed explanations of why those are needed.

I would like to address a couple of questions that came up earlier. One is the misconception that the law allows no flexibility for the handling of wolves and bears. In *Sierra Club, Defenders, et al.*—about 14 groups—v. *Clark*, the court found in fact that trapping can be provided for depredating animals around farms that are experiencing problems with threatened animals. They also found that endangered species could be addressed in a more targeted way, that individual endangered species can also be dealt with, as the Service has indicated. That was a question that had been up in the air before. That was addressed in a footnote, but nevertheless a very enlightening one.

If anything, it provided more certainty than had ever existed before in how we can control threatened and endangered predators.

On the question of western water, we beg to differ. It is not a question of whether the Concho water snake should exist or whether the people of Texas should have water. As in many other circumstances, it is a question of how best to address both of those goals. Both can be done. There are options available to provide cleaner, more abundant water from a pipeline from a reservoir that already exists outside of the jurisdiction of that particular utility. That process would have no effect on the snakes. The current process would eliminate 76 percent of the remaining snakes in the area. Unfortunately, this is a case where the snake seems to have been put to rest.

We would like also to bring to the attention of the committee a couple of other suggestions. One is that in the recovery process, as Director Dunkle has advocated, that we pay particular attention to drafting those plans early and in an expeditious manner with detail sufficient to help us recover the species. We would like also to suggest that those plans be integrated in the consultation process at the earliest point, so that we don't end up in consulting with agencies, giving away bits and pieces of the species until we reach the point where we can no longer actually bring them back to a level where they can be delisted.

We would also like to suggest that the committee watch closely an issue that is now in the courts. The Service, on June 3, 1986, reversed a long-standing policy of the law which had been infor-

mally reversed in 1981, that agencies are required to consult with the Fish and Wildlife Service regarding the effects of their projects on listed species wherever they may occur. In those June 3rd regulations the Service opined that agencies no longer need ask the Service about the effect of their actions on listed species in other countries, whether they be U.S. dollars, U.S. actions, or U.S. licenses.

Now, the average American thinks of endangered species as Asian elephants, tigers, that sort of thing, and those are no longer considered in regard to our actions whatsoever. So we would advise the committee to watch this. It is under appeal.

Finally, the question of a cause of action for damages. That also would set up no new duties, no new obligations of anyone.

If the committee were to assess that and decide that it would be a wise idea, it would allow the Federal Government or anyone else who could prove that a violation of the Endangered Species Act had occurred to recover damages to restore those species to the extent that the scientists can determine that cost. And in many cases it is quite easy; we know how much it costs to raise and release a peregrine or a bald eagle. That would be paid to a fund for the protection of those endangered species, thus relieving the Congress of the duty now to appropriate money from taxpayers who did not contribute to the reduction of those species to pay for recovery after the fact, if we're lucky enough to get it.

Finally, Mr. Chairman, we would like to say that even these suggestions are not major changes in the act. We would like to suggest that the act is a very strong act, a very good one, a very flexible one. Of the 11,000 consultations, only two resulted in jeopardy opinions that said "absolutely not" over the past year. That is a fairly flexible act.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Fitzgerald can be found at end of hearing.]

Mr. STUDDS. Thank you very much, sir.

Mr. J. Scott Feierabend. Am I pronouncing that correctly?

Mr. FEIERABEND. You said that beautifully. You must speak German.

Mr. STUDDS. Fine. For the National Wildlife Federation, welcome.

STATEMENT OF J. SCOTT FEIERABEND, DIRECTOR OF FISHERIES AND WILDLIFE DIVISION, NATIONAL WILDLIFE FEDERATION

Mr. FEIERABEND. Thank you, Mr. Chairman. Good morning.

First I would like to preface my remarks by embracing your opening statement that you intend to seek a reauthorization without amendments that would undercut the overriding purpose of the act. We welcome that.

There are two points that I briefly want to address this morning, Mr. Chairman. The first is that the National Wildlife Federation supports the proposal put forth in H.R. 1467 to reauthorize the Endangered Species Act for five years. The federation testified in support of a five-year bill during the reauthorization process in 1985,

and we are pleased that this subcommittee is now proposing a 5-year bill.

We would also note that the Senate bill, S. 675, is also calling for a 5-year extension.

We hope that the subcommittee will preserve this provision as it advances H.R. 1467.

The second point, and the one that I would like to dwell on a little bit longer, is the need this time to pass a bill expeditiously and to avoid the stagnation and eventual failure to reauthorize the bill that we witnessed last year.

This subcommittee worked very diligently in the last Congress to reauthorize an Endangered Species Act that was acceptable and supported by a broad base of interests, but it was only in the waning hours of the 100th Congress that that bill stumbled and fell. The federation wants to prevent this from happening again by passing a straight bill without amendments.

There are those who might oppose passing a clean or lean bill, as it were, and would ask that the subcommittee entertain amendments. However, we feel that the request for a straight bill is well justified, for several reasons. First, opening the door to amendments will protract debate and will significantly reduce the likelihood of timely passage. This is especially true of major amendments that are controversial and simply don't reflect consensus opinion.

Second, we feel that the Endangered Species Act is a solid piece of legislation that, after 14 years of refinement, needs no more major adjustments. Things such as the exemption process and streamlining the section 7 consultation process, these are examples of how Congress has taken steps to improve the act. The statute has been amended to resolve all of these major conflicts.

Rather than more amendments, what we need now is better administration and implementation of the act, as said by Mr. Dunkle earlier this morning.

Third, we are now essentially in a process of fine-tuning the act and increasingly are debating what I would refer to as species-specific issues rather than focusing on the broader purposes and constructs of the act, such as consultation, listing, and recovery planning.

Already this morning, Mr. Chairman, you have heard a number of individuals referring to such problems, be they perceived or real, with grizzly bears, with wolves, with water snakes, and with sea turtles.

The act, in our opinion, is already well equipped to handle these conflicts which are local and, at most, regional in scope. And besides, if the act is performing as it should, Mr. Chairman, we should occasionally expect conflicts and opportunities to say "no" to some of these situations.

The point I want to make is that if Congress decides to entertain these sorts of narrow issues during reauthorization then we are going to be proceeding down a slippery slope that may result in a very long process. I think we can all be assured that, once Congress opens the species-specific debate, every person that has a problem in their backyard will be knocking at your door to see their problem resolved.

Another reason for passing a straight bill is that frequently amending the act has hampered effective implementation by constant rulemaking. It also creates an atmosphere of uncertainty for Federal agencies, State agencies, private organizations, as well as development. We feel that that type of constant tinkering with the act also, again as Mr. Dunkle has stated, precludes evaluating on a long-term basis just how well the amendments are operating that we have already put into place.

Next, amending the act will increase the administrative burden on the Federal agencies. Witnesses this morning have repeatedly emphasized and demonstrated that government agencies responsible for administering the act are pressed to their limits. The result of new amendments will be to either reallocate resources from potentially more worthwhile responsibilities and programs of the Fish and Wildlife Service or the National Marine Fisheries Service, or else the agencies will ignore these new responsibilities. Neither of these alternatives is one that we can support.

Finally, Congress can amend the Endangered Species Act at any time. Nothing will prevent Congress from acting to amend the statute before 1992 if this bill is passed with a five-year reauthorization, and indeed there is ample precedent to demonstrate that the ESA has been amended outside of the reauthorization process.

This concludes my statement, sir.

[The prepared statement of Mr. Feierabend can be found at end of hearing.]

Mr. STUDDS. Thank you very much, sir.

Mr. Gordon Robertson of the International Association of Fish and Wildlife Agencies.

Mr. Robertson.

**STATEMENT OF GORDON ROBERTSON, LEGISLATIVE COUNSEL,
INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGEN-
CIES, ACCOMPANIED BY PAUL LENZINI, LEGAL COUNSEL**

Mr. ROBERTSON. Thank you, Mr. Chairman, for the invitation to present the association's views on the reauthorization of the Endangered Species Act. I am accompanied today by our legal counsel, Mr. Paul Lenzini.

The association presents its views not merely from interest but in representation of the State fish and wildlife agencies which are charged with the responsibility for fish and wildlife and the implementation of the act at the State level.

I will summarize our written comments for the record.

The association has been a supporter of the act since its passage in 1973, and has also spoken for needed revision of the act, such as the establishment of experimental populations in 1982.

We are pleased to see higher funding levels in H.R. 1467 for both the Federal program and State grants through section 6 of the act. The association recommends a three-year reauthorization period, with funding of State grants at the \$12 million level in fiscal year 1988, \$13 million in fiscal year 1989, and \$14 million in fiscal year 1990.

Because of problems from two decisions of the 8th Circuit Court of Appeals, the association is recommending that the subcommittee

amend the act to better protect fish and wildlife resources. The association's staff is prepared to work with the subcommittee and staff on language addressing these two decisions.

The first is the eighth circuit decision of January 1985. The effect of this decision, at least in the eighth Circuit, is that general Indian hunting rights takes precedence over the taking prohibitions of the Federal Endangered Species Act. Although the Department of the Interior appealed the case to the U.S. Supreme Court, that Court's opinion was made on the Bald Eagle Protection Act, thus letting the Eighth Circuit decision stand on the Endangered Species Act.

This decision could have disastrous results if the remaining population of a species is small, occurs on Indian land, and is not covered by the Bald Eagle Act. Mr. Chairman, I would like to submit for the record a brief from that action which indicates the number of States involved and the number of endangered species involved.

In February 1985, the same circuit ruled against the taking of wolves in specified areas of Minnesota, a program recommended by the eastern timber wolf recovery team. That decision sharply restricts the discretionary authority of the Secretary of the Interior and that of the States for protecting threatened species. The decision is contrary to congressional intent for the Secretary's latitude in these matters and has effectively left management of wolves to the public.

Also, for the record I would like to submit a brief which indicates the number of States who take threatened species and the very logical reasons for that action.

Mr. Chairman, we wish to submit for the record also statements from the fish and wildlife agencies of Minnesota, Montana, and Wyoming. From these the subcommittee can sense not only the sincere desire to protect threatened and endangered species, but the real frustration that these court rulings have given these agencies.

Thank you, and we will be glad to answer any questions that you might have.

[The prepared statements mentioned can be found at end of hearing.]

Mr. STUDDS. Thank you, sir, very much.

Finally, Mr. Tom Pitts, Coordinator of the Colorado Water Congress.

Mr. Pitts.

STATEMENT OF TOM PITTS, COORDINATOR, COLORADO WATER CONGRESS

Mr. PITTS. Thank you, Mr. Chairman. My name is Tom Pitts. I am a professional engineer from Loveland, Colorado, and for the last three years I have served as project coordinator for the Colorado Water Congress Special Project on Threatened and Endangered Species.

The Colorado Water Congress is made up of the organizations that are responsible for providing water for the people of Colorado. Two years ago, when I testified before this committee, we pledged our support to basinwide efforts that are going on in the Colorado River and the Platte River to resolve potential conflicts, major con-

licts, between implementation of the Endangered Species Act and western water law and the U.S. Supreme Court decrees that back up that water law. Those efforts are going on in the Colorado River basin and the Platte River basin, and I am pleased to report that we have a success story in the Colorado River basin. The effort in the Platte is still on-going

The amendments that we propose are not substantive changes to the act, but are designed strictly to reinforce and ratify the successful efforts of the basinwide committees in those two areas.

In the Colorado River basin we have been working with the States of Colorado, Utah, Wyoming, with the U.S. Fish and Wildlife Service and the Bureau of Reclamation to develop a program to resolve those conflicts.

The program that resulted is, in fact, a recovery program for three endangered fish species in that basin. That program will not only protect endangered species, but has the goal of recovering and delisting those species over a 15-year time frame.

Over the next 15 years the water users, hydroelectric power users in the States, are committed, according to the program, to spend \$26 million in the recovery of those species.

This is a landmark achievement and one which cannot be overstated in terms of its importance to the upper Colorado River basin and its precedent nationally.

We were asking for this subcommittee to recommend authorization and appropriation of \$10 million to establish habitat for endangered species in the upper Colorado River basin. This habitat will be in the form of acquired water rights, water rights which will be acquired and administered in accordance with State water law.

Those water rights, in turn, once they are established as habitat for endangered species, will be protected under State water law. In this manner, we have come up with a program that will solve the problem of endangered fish species in the Colorado River basin and lead to their recovery, consistent with State law.

The program goes far beyond that, however, and it includes efforts at habitat management, predator control, and many other facets which will lead to recovery of these endangered species.

The program has the formal endorsement of the director of the Fish and Wildlife Service regional office in Denver, two directors of the Bureau of Reclamation. It has the endorsement of the representative to the basin committee of the State of Colorado, the Colorado water conservation board, the State agency responsible for implementation of instream flows, and the board of directors of the organization that I represent, the Colorado Water Congress. We expect formal endorsement shortly from the States of Utah and Wyoming.

Your support for this program will provide a very positive incentive for all of us who have worked long and hard to develop it, and who are looking forward to its implementation.

In the Platte River basin we are working towards a similar goal of coming up with a program to resolve the conflicts between the Endangered Species Act, western water law, and interstate compacts. This program also needs your support, at least in the form of

the amendments we are proposing, to keep those who have been working in good faith appraised of your support.

Specifically, we are asking that the Congress require a report by the Secretary of the Interior by March 1, 1988, concerning progress made by these two basin committees. In the Platte River basin, efforts have lagged somewhat due to funding problems and staffing support by the two Federal agencies involved. More recently, we have seen the kind of staff support we need, but we believe requirement of a report by the Secretary on these two basin activities will provide the incentive needed to ensure the successful completion of both.

Where these two basin committees unanimously adopt a program or plan for recovery of endangered species, we are asking that you specify that the Secretary of the Interior implement those plans where he finds that they are consistent with the Endangered Species Act, State water law, and interstate compacts. This will support the kind of solution, and an avoidance of conflict, that we are seeking.

Finally, we are asking for a two-year reauthorization of the Endangered Species Act. We think that this will indicate to all the parties concerned that Congress is watching our work, that you want a report on it, and will provide the opportunity, when the Secretary makes his report back to the Congress, for recommending amendments, if necessary, for funding arrangements or regulatory changes in either Federal or State law to implement these two programs.

We appreciate your support, and thank you very much for the opportunity to testify.

[The prepared statement of Mr. Pitts can be found at end of hearing.]

Mr. STUDDS. Thank you, sir.

Gentlemen, I think you all heard this morning the initial witnesses, the Congressmen from Montana and Idaho and Texas; and then you heard the ebullient good humor of the director of the Fish and Wildlife Service, notwithstanding the date of the day, telling us that in his judgment the problems referred to in the earlier testimony of the Members of Congress were, if not resolved, well on the way to resolution to the satisfaction of all parties.

Do you share that optimism with respect to the concerns expressed by the Members of Congress this morning? Whoever would like to respond—who wants to go first here? Mr. Robertson.

Mr. ROBERTSON. No, I guess I don't share that optimism, Mr. Chairman. Our State members are quite concerned about the Eighth Circuit ruling. They are quite concerned about the impact that that has on their management latitude. They are quite concerned about their interaction in recovery plans. They are quite concerned about the species and the resource, and that is utmost in their minds. But I am afraid, under the current circumstances and under the two 8th Circuit rulings, we cannot share that optimism.

Mr. STUDDS. Anyone else like to speak to this?

Mr. BEAN. I would say, not so much with specific reference to those species—the wolf and grizzly bear, which are species for which it is difficult to come up with solutions that can generate wide public support—but rather generally under this act there are

some clear signs of hope in that a number of species are well on their way to recovery, a number of species have in fact been delisted as a result of recovery.

But having recognized that, one must at the same time recognize that there are an equal, if not greater, number that have continued to plummet straight down notwithstanding the protection of this act.

It seems to me that one cannot be terribly optimistic about the long-term success of this act for many of the species it tries to protect with the current level of resources. I think it is abundantly plain in the section 6 program that fully two-thirds or more of the species listed in the United States receive no benefit from that program, yet that is likely to be an indispensable vehicle for recovering those species.

It was mentioned by one of you gentlemen this morning that the Fish and Wildlife Service has developed about 300 recovery plans for the species that it has listed. Well, the fact is that the implementation of those plans is sadly lacking. None of those plans has been fully implemented. Most of those plans have been implemented to a very minor degree, if at all.

So I think that overall there are serious reasons to be concerned that for this act to achieve its goals, more resources are going to be needed, and that really is the bottom line.

Mr. STUDDS. Anyone else want to respond to that?

Mr. FITZGERALD. I would like to, briefly.

Mr. STUDDS. Yes?

Mr. FITZGERALD. In the overall picture I would agree with Mr. Bean that the resources necessary to carry out the intent of the law are not available. We are therefore seeing far more declines in species than we are recoveries. A very small percentage are actually known to be recovering, a large number known to be declining, and last Wednesday the Service proposed to delist another species as extinct, having been eliminated, apparently, by a dam in Texas.

In regard to the court decisions Mr. Robertson mentioned, there were relatively few, if any, major changes in State management brought about by those decisions. The decisions stopped the proposed sport trapping season on wolves, but no changes other than that have been made, in fact, even that sport trapping season had not yet been initiated. And I think most of the agencies have found that they can manage these animals fairly well.

In fact, a survey all across the State of Minnesota found that even in wolf territory, people there were very encouraged by the presence of wolves and wanted those wolves to recover and wanted to maintain the protection that existed for them. Thank you.

Mr. FEIERABEND. Mr. Chairman, if I may speak specifically again to the two species that were discussed this morning. First of all I think the point may have been missed by a couple of the Representatives that, in fact, the purpose of the Endangered Species Act is to get these species off the list. The sooner that these animals are recovered to the point that they can be delisted and State management authority restored, the problem will be resolved. I think it is unreasonable to think that that problem is going to automatically disappear any time soon; that simply isn't the case.

Second, in describing the recovery planning process for the wolf, Mr. Dunkle, said that the recovery plan is a consensus-building, political consensus-building, document. The fact of the matter is that the recovery plan is a biological blueprint for the recovery of a species. I think the use of that document as described by Mr. Dunkle is ill-conceived.

Mr. STUDDS. Thank you.

The gentleman from New York.

Mr. DIOGUARDI. Thank you, Mr. Chairman.

This is my first meeting in this subcommittee, and I am pleased to be here. Ever since my youth, I have always had a great interest in animals. In fact, I was born and raised in the Bronx just two blocks from the Bronx Zoo and spent many of my childhood days in that wonderful park.

I listened to the testimony with great interest, and I was thinking about the crisis that we face today in Government. We must take a longer view, Mr. Chairman.

Yet, everything I have witnessed in my short tenure here in politics—after 22 years as a certified public accountant; has shown me that there are a lot more people that know how to spend than know how to count. [Laughter.]

But that be as it may, I am concerned about the budgetary process, the short-term view that this institution takes to the authorization and appropriations of monies, the lack of strategic thinking in almost any area, the lack of policymaking that I have seen here as a Congressmen in the less than two or three years. I am getting an education every day.

I am very concerned about the issue that you people come here to testify about because we need to take a much longer view. I certainly would support a multiyear authorization and appropriation of this act.

But I am concerned that the resources will be compromised at some point, as I have seen them compromised either by this institution or by the administration, in some kind of interpretation of regulations, as we have witnessed with food stamps with people in motels if you can't get it legislatively maybe we can get it back through some interpretation.

So I think we have got to be ever mindful because animals like this, the species that are on their way out, can't wait for surpluses. I think it is going to be a long time before we see surpluses, no matter how you keep the books. I think we have a lousy bookkeeping system here in Washington.

As a matter of fact, Mr. Chairman, we are still using the same mickey-mouse cash-basis system of accounting that we took New York City off of in 1975. So we are literally disguising more than half of economic reality as it is. That puts in even greater danger your cause, and many causes that really can't survive the crisis management that I have witnessed here in Congress.

I make this as my first opening statement on your committee because I want you to understand my philosophy. I am a fiscal conservative. However, there are some things I hold near and dear, especially the things that we treat as our legacy to the future, and I believe they cannot be held hostage to a budget crisis.

It's time that we take a capital budget mentality. I know we don't have a capital budget; 37 States of 45 that responded to the GAO have a capital budget, but not the United States of America.

So therefore, we have got to, in some ways, in our thinking take account a capital budget mentality to those things that can't afford to be a hostage to the day-to-day exigencies of our budget and appropriations process.

With that, I can just tell you that I support your goals. I support the reauthorization of the act. I hope that when the appropriations committees get it, that they treat it with the recognition it deserves relative to other day-to-day programs around here.

The one question I would ask, though, as I get my education. I sometimes wonder where we draw the line between what the Federal Government does and what the States do. And I am one that would like to see the States do more, although I see a very strong Federal role in this area.

But what do the States do? To what extent do the States share in the costs of your programs in general? I may have missed the morning meetings and you may have covered that, but I would like to understand better what we expect of the States in fulfilling our responsibilities to the future here.

Mr. BEAN. I would be happy to offer a response.

Mr. ROBERTSON. Mr. Chairman.

Mr. STUDDS. Go ahead.

Mr. BEAN. I would be happy to offer a brief response, and apparently Gordon would as well.

Section 6 of the act was designed to encourage the States to develop complementary endangered species programs of their own. The inducement for doing that was the offer of Federal financial assistance in the amount of 75 percent, I believe, of the cost of implementing those programs.

The requirements that a State must meet in order to be eligible for section 6 funding are rather modest, and most States—I think, a total of 49 of the 53 States and territories that are otherwise eligible—have met those requirements. New York is a State that met those requirements quite a number of years ago and has been a beneficiary of section 6 funding. So the Federal Government cooperates with it and provides a share of the financial support for the State's endangered species projects.

However, in fiscal year 1986 the total amount of money made available to the State of New York by the Federal Government under section 6 for protecting the State's endangered species was \$36,000—obviously a trifling sum, and indeed it represents less than a tenth of the level of support that had been provided in the period 1978 through 1981. So today's \$36,000 has already been reduced by more than 90 percent from of what it was less than a decade ago.

Moreover, many prominent species in the State—like the bald eagle and the peregrine falcon, which are well known, clearly recognized, and clearly supported by members of the public—have received not a dime in support pursuant to section 6 in the State of New York. That is largely true in State after State. I could go through every member of this committee and explain the same situation where the sums are truly trifling.

So the States have been induced to establish programs by the promise of Federal cooperation and Federal financial assistance, but the promise has not been kept.

Mr. DIOGUARDI. Are the States spending money, in any case? Let's take New York State. Do you know what New York State has spent?

Mr. BEAN. I don't have the total dollar figure, but the answer is, yes, the States are spending money of their own that they have raised in a variety of ways. Many of them have implemented tax checkoff schemes or other special revenue-raising schemes to carry their share of the cost of their endangered species program. But their share has turned out to be far greater than the share that was originally contemplated by section 6 of the act.

Mr. STUDDS. Let us ask you to accelerate. The gentleman has exceeded his time, but it was his maiden speech, so what the heck. [Laughter.]

Mr. DIOGUARDI. Well, I appreciate that.

Mr. STUDDS. Go ahead.

Mr. ROBERTSON. Yes, Mr. Chairman, Mr. Congressman, having once lived in New York, I have some familiarity with their programs. New York does have a very strong program in endangered species and threatened species.

But more to the point of your question, the States have a significant role in the Endangered Species Act and its implementation. They work hand in hand with the Service to bring about the recovery plans and the process of evaluating habitats and needs and even whether or not the species is a candidate.

There is, however, an important concern about where jurisdiction extends from the Federal Government and where it ends in the act. The States feel that there is sometimes too much Federal jurisdiction, that their own States' rights for authority over native wildlife have been removed somewhat. But the States are very committed. There are 33 States that have their own mechanism for fund-raising for endangered species programs, and as much as public support and legislative support in those States will allow, they do conduct an endangered species program.

Mr. PITTS. Mr. Chairman, may I make a brief response?

Mr. STUDDS. Briefly, Mr. Pitts.

Mr. PITTS. In the case of the Colorado River, as I mentioned in my testimony, \$26 million, or in excess of \$26 million, of the funds for recovery, which is a long-term capital recovery program, will come from power users, water users, and the States. The \$10 million we are asking for is a fraction of the cost of the program is not an annual appropriation but a one-time establishment of a capital fund.

We feel that this program is important as a national precedent. It does set long-term goals. It does provide the means of Funding for them, and we think it's a good way for the Fish and Wildlife Service to approach recovery.

Mr. DIOGUARDI. Thank you.

Mr. STUDDS. We want to welcome the gentleman from New York to the subcommittee. We look forward to his participation in our deliberations. I thought that I was one of the few remaining members of the endangered species of genuine conservationists around

this city. So I am glad that there are some more of us. Thank you for being here.

The patient gentleman from California?

Mr. ANDERSON. Thank you, Mr. Chairman. I notice the gentleman from New York makes speeches almost as good as the chairman does, too. [Laughter.]

My question is directed to anyone. Last session the Congress passed legislation that provided for the translocation of the California southern sea otter and the establishment of a second population of this threatened species. Now, how can the Service expeditiously implement this program if no additional specifically earmarked funds are made available to accomplish this task?

Mr. BEAN. The answer is very easy: poorly, and slowly. It definitely needs additional resources for that purpose.

Mr. ANDERSON. In other words, we must have funds and they should be earmarked?

Mr. BEAN. I think so.

Mr. ANDERSON. Mr. Bean, in your testimony you state that Federal agencies must make more effective use of their authorities to assist in the monitoring and protection of candidate species. Would you care to comment on the remarks made by the representatives of the Bureau of Land Management and the Forest Service on their activities in this area?

Mr. BEAN. Yes, I would. The Bureau of Land Management representative's response to the chairman's question about the use of the authority to designate areas of critical environmental concern rather dodged the question, I think. He did point out correctly that ACEC's, as they are called, are just one management tool. It is, however, the case that the Federal Land Policy and Management Act, which is the basic organic authority under which BLM operates, directs BLM to give priority to the designation of ACEC's.

In fact, he didn't explain why, if ACEC's have been so terribly effective in your State of California and in Oregon, why they have been ignored altogether in other States. The only explanation for that, I think, is that BLM is given no direction from its Washington headquarters. Its State supervisors are getting no direction from its Washington headquarters to give the priority to the use of that authority that the organic BLM act directs, so that that authority can be used to complement the Endangered Species Act.

For the Forest Service, while it is true that the Forest Service is making significant commitments to protecting endangered species, I think that much more needs to be done. Specifically, it too has authority to designate what are known as research natural areas and so-called special-interest areas, including biological interest areas. Those are ideally suited to the protection of both listed and candidate species; yet there has been very little use of them by that agency for that purpose.

So I think both of those agencies could be doing a good deal more than they currently are.

Mr. ANDERSON. Thank you. My next question is, I guess, to anyone. Last year's proposed reauthorization bill included a provision to require the Fish and Wildlife Service to monitor candidate species and to use emergency listing authority to list those species when necessary.

Do you believe this provision is necessary, and do you support its inclusion in this year's bill?

Mr. FITZGERALD. Yes. In fact, that is one of the items of highest consensus, I think, in the conservation community. Mr. Bean described a very simple process, and I think that there is almost no objection whatsoever to that being included again, neither in this body nor, as far as we are aware, in the other body.

Mr. FEIERABEND. If I may, I would also like to respond to that.

Mr. ANDERSON. Yes.

Mr. FEIERABEND. The National Wildlife Federation, although opposed to amendments, supported these proposed amendments last year. If the amendatory process is opened, we would again support these provisions as well.

Mr. ANDERSON. Another question that doesn't really relate directly to California, but I seem to get an awful lot of mail on it regards legislation has been introduced that would prohibit the importation of Australian kangaroos or products made from them. Judging from the volume of correspondence that the subcommittee has received, there appears to be a great deal of interest in this legislation.

Do any of you have any specific position on that?

Mr. FEIERABEND. We don't, sir.

Mr. ANDERSON. All right.

Mr. FITZGERALD. I would just commend the committee's attention to the Australians' own review of that situation. They have found, apparently, that that is a very poorly managed hunt, and the committee may want to look at the data that they looked at and look at the conclusions that they reached. Thank you.

Mr. ANDERSON. Mr. Fitzgerald: What specific actions have been taken, in your estimation, to develop recovery plans for the right whale and the humpback whale?

Mr. FITZGERALD. The National Marine Fisheries Service is in the process of developing those plans, largely due to the pressure and the resources provided, specifically earmarked by the Congress for that, and the threat of litigation from a number of groups who work in those areas.

Mr. ANDERSON. I think I have one more if my time has not run out.

Mr. STUDDS. Well, you're doing all right.

Mr. ANDERSON. You gave me these questions, I'll say, sir. [Laughter.]

Mr. STUDDS. I disclaim responsibility for the kangaroo one. I am attempting to trace that at the moment. [Laughter.]

Mr. ANDERSON. My last one is that Mr. Stenholm testified this morning in support of the construction of the Stacy reservoir dam in Texas. Now, Mr. Dunkle's testimony indicates that the Service has taken a hard look at mitigation options and has found ways to allow for the construction of the dam while providing for the conservation of the threatened Concho water snake.

Would any of you care to respond to the comments made on this issue?

Mr. FITZGERALD. I would be glad to.

Mr. ANDERSON. Mr. Fitzgerald.

Mr. FITZGERALD. In May of 1986 the Service issued a conferral opinion, a preliminary biological opinion, that that dam would jeopardize that threatened water snake and that there were no alternatives that they had been aware of or apprised of that would avoid that jeopardy, and advised the utility to seek other sources of water. Several were suggested.

Since then, pressure was brought to bear on the Service and on the Corps of Engineers to develop ways to provide both the Concho water snake and that particular dam. In our notes, secured through a Freedom of Information Act request, we understand it was basically a preordained conclusion they were instructed to reach. They reviewed the data, came up with new analyses, and determined that despite the elimination of 76 percent of the remaining snakes and half of its habitat, that that population would not be jeopardized.

The herpetological community is rather upset, to say the least. But this is one instance where the biologists may not have won.

Mr. ANDERSON. Thank you.

Thank you, Mr. Chairman.

Mr. STUDDS. Thank you very much.

We will not inquire, at least not at this time, which one of you just might be responsible for the mail to which the gentleman from California refers. [Laughter.] But it is a very effective one of you, whoever it is. [Laughter.]

I also just want to thank you individually and the organizations which you represent for the work you have done over the years in helping this Congress do what it does not do best, which is think and reflect, much the way the gentleman from New York was referring. It's not an easy thing to do in this life of chaos. You can be very proud of the role you have played over the years.

I thank this panel.

We will recess until 1:30, when we will resume with panel four. The subcommittee stands in recess.

[Whereupon, at 12:42 p.m., the subcommittee was recessed, to reconvene at 1:30 p.m., this same day.]

AFTERNOON SESSION

Mr. STUDDS. The subcommittee will come to order.

We will begin where we left off this morning. But before doing that, I would like to offer subcommittee members the opportunity to make any brief statements they might wish to make regarding the primary subject of this afternoon's session, which is the shrimp-sea turtle controversy in the Gulf of Mexico.

The gentleman from Louisiana.

Mr. TAUZIN. I thank the chairman. And I will be brief, Mr. Chairman.

Just last week, some 5,000 representatives of the shrimping industry in Louisiana and some from Texas gathered in my hometown of Thibodaux, protesting this proposed regulation called "TED's."

Now, the protest is mainly aimed at the unscientific basis upon which the regulations are proposed. Today at these hearings we hope to ask some of the questions regarding this negotiated agree-

ment and the scientific basis or lack thereof from which the TED's recommended proposal has now emanated.

Five thousand shrimpers in my hometown meeting to protest a regulation, five thousand families concerned that this regulation, not based upon scientific data, may in fact damage not only their chance to survive economically, but destroy a family resource, a family tradition in shrimping in the Louisiana Gulf Coast.

This is of serious concern, enormous concern to the people I represent along the Gulf Coast of Louisiana, and I am sure to the people along the Gulf Coast of Texas. We want some very good answers and some very clear answers on this negotiated agreement. We hope this session gives us a chance to explore whether in fact this has been a scientific recommendation or one perhaps negotiated with a lack of scientific evidence to back it up. We will look forward to the testimony of the witnesses today regarding that specific objective.

Thank you, Mr. Chairman.

Mr. STUDDS. I thank the gentleman. What is the population of Thibodaux?

Mr. TAUZIN. The total population of Thibodaux is something like about 18,000.

Mr. STUDDS. I see. I get the picture.

Mr. TAUZIN. So we almost doubled the population in one meeting.

Mr. STUDDS. The gentleman from Texas?

Mr. ORTIZ. Thank you, Mr. Chairman. I want to thank you for inviting a panel of witnesses to the hearing today to discuss the proposed National Marine Fisheries Service regulations on turtle excluder devices, commonly called TED's. I believe that this is a very timely hearing and one that is important not only to the shrimping industry but also to those concerned with the continued survival of the endangered sea turtle.

I particularly appreciate your inviting my constituents to testify, and I would like the subcommittee to join me in welcoming Mrs. Margie Grunert, from Port Isabel, Texas. Mrs. Grunert is the chairman of the Texas Shrimp and Sea Turtle Survival Coalition, which represents over 600 shrimpers.

Also, I want to welcome Mr. Julius Collins, of Brownsville, and a member of the Gulf of Mexico Fisheries Management Council, and a member of the board of directors of the Texas Shrimp Association. He is accompanying Ralph Rayburn, the executive director of the Texas Shrimp Association.

Mr. Collins and Mrs. Grunert have both tested the TED's on their boats, a fact that should be helpful to the subcommittee in considering this issue.

I welcome all of you as well as the other members of the panel and look forward to hearing from you this afternoon.

As we all know, there are five species of sea turtles which are found in the United States, and all of them are listed as either a threatened or endangered species. Under the authority of the Endangered Species Act, NMFS has issued proposed regulations requiring the use of TED's by certain shrimpers.

The shrimpers in my congressional district as well as along the entire Gulf of Mexico are concerned about the potentially devastat-

ing impact this regulation could have on their industry. As a supporter of the reauthorization of the Endangered Species Act, I share the shrimpers' concern about the impact of this law on the Gulf shrimp industry. The southeast shrimp industry is the most valuable in the United States and an important economic contributor to coastal communities all along the Gulf and south Atlantic coasts. I believe that the concerns of the shrimp community should be examined by the members of this subcommittee, and am pleased that a portion of this hearing has been dedicated to that purpose.

I must admit that at this time I do not support the proposed regulations requiring TED's use by shrimpers. I have many concerns about the research on TED's, the data used to support the need for TED's, and the availability of TED's by the July 15 deadline.

Furthermore, I am not convinced that requiring shrimpers to use TED's is the best and most cost-effective way to save the endangered sea turtle population. I have many questions for all of the witnesses, and I look forward to hearing their testimony.

Mr. Chairman, I again thank you very much for providing this avenue so that we can air the concerns of my constituents.

Mr. TAUZIN. Would the gentleman yield just a second?

Mr. ORTIZ. I do.

Mr. TAUZIN. I neglected to thank the chairman, and I want to thank him particularly for centering some attention of the committee hearings on this particular item. Tonight, in another town adjacent to—

Mr. STUDDS. Not again?

Mr. TAUZIN. In Homer, LA, there is another hearing on this regulation, and many of the same fishermen that were gathered in Thibodaux out are meeting tonight. I am sending word to them of your interest in allowing this hearing to focus on this particular question, Mr. Studds, and I want to thank you personally for that.

Mr. STUDDS. Well, I think I appreciate that. [Laughter.]

I would make one plea, as I do my own self-education process here, and that is that if you could put your heads together and try to come up with a better acronym. I keep thinking I am hearing reference to my senior Senator, and this upsets me a great deal. [Laughter.]

Mr. TAUZIN. Nobody has recommended putting him in a net, have they? [Laughter.]

Mr. STUDDS. Never mind. [Laughter.]

He and I are the only two people who are not seeking higher office at the moment in the Congress. [Laughter.] We may be the only sane ones.

I understand that the distinguished, almost unbelievably distinguished, gentleman from North Carolina would like to address the subcommittee for a moment. I don't know whether the gentlemen represents shrimp or turtles, but I can't tell him how welcome he is.

Charlie.

**STATEMENT OF HON. CHARLES ROSE, A U.S. REPRESENTATIVE
FROM NORTH CAROLINA**

Mr. ROSE. Thank you, Mr. Chairman. I represent both, and in my district, which is the coast of North Carolina, the southeastern coast, we have a very beautiful island called Bald Head Island that has a nature conservancy that has as one of its very important projects the preservation of loggerhead turtles. I have actually been out there with them when they take turtle eggs and replace them in higher ground, cover them so opossum or squirrels or fox couldn't get to them. That has become a very popular pasttime and a very worthwhile effort in our district.

I also have literally hundreds of shrimpers, and one of the oldest and wisest shrimper friends of mine talked with me yesterday, and he had just a few observations about this. He observed that Congressman Walter Jones had allowed as how he didn't mind these regulations as long as they were outside of the inland waterway and he observed that being as how all of his shrimping was inside the Pamlico Sound, he thought that was a very nice position for him to take.

But in our area, most of the shrimping is outside the shore, not in the inland waterway. His observation was simply that in the 33 years that he has been a shrimper, he said, "I have caught hundreds of turtles but I have only thrown back two that were dead."

Now, you might have all kinds of humane problems with dragging turtles from miles and miles and hours and hours, but he has actually been using the suggested net trap, and he says that the shrimpers in our area would feel very comfortable with using the device if it was limited to June and July, but that they wanted some consideration given to not having it a requirement year-round. That's the only thing I wish to come here and say.

I realize that there are national policy issues here. I support your effort to renew the Endangered Species process, and I salute you for the fine work that this subcommittee does. If there is an implementation, if there can be some regional regulations written, if that can factor in as a compromise somewhere along the way, I would urge that at least somebody give that some thought.

Thank you very much, Mr. Chairman.

Mr. STUDDS. I thank the gentleman.

While we are seeking for a new acronym, what did the gentleman say was the name of that island?

Mr. ROSE. Bald Head.

Mr. STUDDS. That's what I thought. Well, we can continue searching for new names generally.

Mr. ROSE. Thank you, Mr. Chairman.

Mr. STUDDS. I thank the gentleman.

Let us go then to our panel, and let us proceed as we did this morning. We will recognize each of you for a maximum of 5 minutes for your oral presentation. Your written statements will appear in full in the record, and we will take you in the order in which you appear on the list, starting with Mr. James Douglas, of the National Marine Fisheries Service.

Mr. Douglas.

STATEMENT OF JAMES E. DOUGLAS, ACTING DEPUTY ASSISTANT ADMINISTRATOR FOR FISHERIES, NATIONAL MARINE FISHERIES SERVICE.

Mr. DOUGLAS. Thank you, Mr. Chairman. Mr. Dunkle received such goodwill from the panel this morning in this seat, I hope he hasn't used it all up, I will say that.

My written testimony is before you, and due to the compressed time schedule, what I would like to do is merely summarize that at this time.

The written testimony is replete with a lot of data because I recognize, as Mr. Tauzin and Mr. Ortiz have said, that that is the information they are seeking. Five species of sea turtles that are listed as endangered or threatened are caught in shrimp trawls in our southeastern United States. These are the loggerhead, Kemp's ridley, green, leatherback, and hawksbill.

Based on observe data, NOAA estimates that annually 47,900 of these turtles are inadvertently and incidentally caught and that over 11,000 of these die. Loggerheads represent about 90 percent of that total, and the Kemp's ridley represents 6 percent. Now, the Kemp's ridley is probably the most critically endangered species. Its nesting numbers have dwindled from an estimated 40,000 in one day in 1947 to an annual estimate of 572 in 1986. An estimated 767 are killed each year by shrimp trawling in the southeast.

Beginning in the late 1970's, NOAA began research to develop gear that would release turtles but yet not affect the shrimp catch. By 1981 NOAA had produced the turtle excluder device, or what we're calling the TED. Tests show that it will release over 97 percent of all turtles encountered and did not affect the shrimp catch.

Subsequent testing showed that the TED released large amounts of other unwanted components of the by-catch such as sharks and rays, jellyfish, horseshoe crabs, and other debris. NOAA continued to refine the TED to make it more acceptable to the shrimpers. The TED was made smaller, lighter, and collapsible so it could be handled easier on the deck.

With all these factors going for it, NOAA felt that the TED would be warmly embraced by the shrimpers. In 1983 NOAA began an educational program to encourage voluntary usage. This program included providing prototypes to shrimpers who wished to try them. Despite these efforts, very little voluntary usage has occurred.

It should be noted that NOAA is not the only player engaged in TED research and design. Several State Sea Grant programs as well as private parties are also in the pursuit of a workable TED, and presently we know of at least three other designs that perform very well.

In August 1986, Under Secretary Calio met with representatives from the environmental community and the southeastern shrimp industry, where they reviewed potential regulations. Neither side was happy, but both agreed to work with NOAA to develop acceptable regulations.

Shortly thereafter, the Center for Environmental Education served notice on the Secretary of their intent to sue under the Endangered Species Act. This requires 60 days' notice to be given, and

Dr. Calio decided to use this time to seek a negotiated set of regulations.

Six representatives from each side agreed to undertake these negotiations, and NOAA agreed to supply all the data available in its files. After four negotiating sessions of several days' duration each at different locations in the southeast, the group concluded with an agreement, and the proposed regulations that are now being published accurately capture that agreement.

Now, 11 of the 12 negotiators signed the agreement, but at this time three of the industry groups that were directly represented, including the one that didn't sign at the negotiations, have gone on record as opposed to the proposed regulations.

The details of the regulations are quite complex, but in quick summary, nets of less than 30 feet are generally exempt providing no one is using more than two such nets; rock shrimp and royal red shrimp fishermen are exempt; there are four designs of TED's that are certified for use; there is a protocol for certifying additional TED's if someone comes up with a better design; the use of TED's is required in various areas during various seasons with various beginning dates from Cape Canaveral north to Ocracoke Inlet, around the Florida keys, and from Mobile Bay westward to the Texas-Mexico border.

Page 13 of my written testimony has more details on those requirements if you would like to refer to it.

The regulations also announce an enforcement policy that provides protection for any shrimp fishing in accordance with the regulations if a sea turtle is then accidentally taken.

I think NOAA would be remiss if it didn't point out, as Mr. Ortiz has done, that the southeastern shrimp fishery is indeed our largest commercial fishery in terms of dollar value. 1986 was a record year, with landings valued at \$617 million. We also estimate that over 17,000 craft operated by over 30,000 fishermen engage in this fishery.

In a nutshell, Mr. Chairman, NOAA believes it has followed a reasonable course in its attempt to comply with what is the law of the land, and negotiations certainly seemed the best chance of reaching acceptable regulations.

That concludes my summary, Mr. Chairman, and I will try to answer any and all questions as directly as I can. I would point out that on the panel, two of the gentlemen were participants and principals in the negotiation process, so maybe we can get some answers there. I thank you, sir.

[The prepared statement of Mr. Douglas can be found at end of hearing.]

Mr. STUDDS. Thank you, sir.

Next we will hear from Mr. Ralph Rayburn, of the Texas Shrimp Association.

Mr. Rayburn.

STATEMENT OF RALPH RAYBURN, EXECUTIVE DIRECTOR, TEXAS SHRIMP ASSOCIATION, ACCOMPANIED BY JULIUS COLLINS

Mr. RAYBURN. Good afternoon, Mr. Chairman, and members of the committee. My name is Ralph Rayburn. I am the executive di-

rector of the Texas Shrimp Association, and I have held that position for 9½ years. My background is a biologist with a master's degree in biological oceanography.

During the last 9½ years that I have been a principal executive officer in our association, I have worked on the issue of turtles and shrimpers' conflicts for at least 9 of those 9½ years, and I think during that time we have established a record of sincere concern over this problem and done everything in our power to help offset the conflict that we find ourselves in at this time.

Within the association we also have helped inform our membership on what the laws are concerning endangered species, methods of resuscitating turtles, the development of the TED, and attempting to get the moneys into the State, and have been successful with the help of the National Marine Fisheries Service in doing work with our fishermen to make them aware of the devices, how they can be emplaced in their trawls and doing what we call result demonstrations on the available devices.

Still, with all that, as Mr. Tauzin and Mr. Ortiz have indicated, there is a major crisis that has developed along the coast of the southeast over the proposed rules that were published on March 2. I would like to highlight some of those concerns as I understand them from the fishermen's perspective.

First of all, it is agreed or has been indicated that the major problem is over the Kemp's ridley, which is classified as the most endangered of all the sea turtles. The range of the Kemp's ridley estimates are from tagging done at the site of their only nesting beach in the world—which is 17 kilometers of beach in Mexico about 200 miles south of Brownsville—50 percent of the turtles that have been recovered from those tags have been in domestic waters and 50 percent have been from Mexican waters.

So the range of the organism and the impact of looking at restrictive measures on our own domestic fleet when this range is known is a great concern to the shrimp fishermen in the southeast.

As I mentioned, the nesting location is 17 kilometers of beach in Mexico. It's an area that prior to 1977 had been highly poached by Mexicans and the recruitment into the fisheries had been virtually shut down. The fact that the nesting beach is in Mexico, and while the U.S. would seek to have some input as to how Mexico might manage it, it still belongs to Mexico and it's up to them to protect it. While they're protecting turtles on the beach, they still have shrimpers operating immediately off the beach when the adult turtles move offshore after laying their eggs or when the young turtles move offshore after being hatched in the beaches of Rancho Nuevo. So that is a concern for our shrimpers.

How do we expect to save the ridleys by imposing greater and greater restrictions on our own fishermen if Mexico goes unimpeded as far as what they are doing down there or do we only sit back and listen to what they tell us they're doing with no real leverage to impose or have them impose the same kind of restrictions on their fleet that we are having imposed by the proposed regulations that are brought forth.

I mentioned the years of nonrecruitment into the fisheries. The turtle eggs in Mexico are considered aphrodisiacs. The Kemp's ridley is the only sea turtle that nests during the day, so it's a

readily and easily identifiable target for anyone who would seek to either capture the adult as she comes upon the beach to lay her eggs or to find the nest as the eggs are laid. In both cases these are prized possessions in Mexico, and while there certainly has been some effort over the past few years to restrict the market channels, but still turtle products are readily available in the Mexican market and do command a significant price.

So that is a concern for the fishermen: How do you protect that nest; and what if we do use TED's, we still have the problem of the only nesting beach in the world for these turtles is that 17 kilometers of beach off of Mexico.

The stranding data was used in evaluating where the most critical areas are for use of TED's. Certainly the data was somewhat weak at best. The stranding program is one that has been developed since 1980. It is highly dependent on the accessibility of beaches. You must be able to drive a pickup truck or a four-wheel-drive vehicle down the beach and count the dead turtles that have come ashore, and then really what have you found?

Six to eight months ago, the shrimp industry was blamed for a massive turtle stranding in the upper Galveston beach area. There were 42 turtles, as I recall, involved in that. The industry was accused of carrying machetes in their vessels so they could dismember the turtles once they caught them in their nets and stuff like that. Well, upon further evaluation by NMFS personnel at the Galveston lab, it was found that those turtles were—by the best indication they could find, the strandings were due to removal of offshore oil wells immediately adjacent to that beach. It had nothing to do whatsoever with the shrimp fishery. Yet the industry was accused of creating that problem.

I think later that accusation has been retracted, but still it is the kind of circumstantial evidence that the industry has had held against it for a number of years.

Again, we think Mexico is a key. Unless this Government is prepared to provide the kind of leverage that would be needed and the kind of leverage that is being used in other cases—for instance, the Marine Mammal Act—to ensure that other countries who we have to compete directly with in our marketplace, without any encumbrance of tariffs or quotas, unless those countries are forced to use the same devices where they have the same organism that we are trying to protect up here, then you are basically discounting the domestic industry and supporting the foreign industry. Certainly, we think that is grossly unfair.

We do want to make a positive effort on this. I think we have been positive in the past. We have some positive considerations that we have offered to Dr. Calio in our initial response on the proposed regulations. We don't want to be totally negative on this. We've worked with the environmental community for many years on many different efforts, and we hope that this particular crisis won't be the dismantling of that good-faith effort that we've had for many years on other items.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Rayburn can be found at end of hearing.]

Mr. STUDDS. Thank you, Mr. Rayburn.

Next, Mr. Leonard Crosby, of the Bryan County Fishermen's Cooperative.

Mr. Crosby.

STATEMENT OF LEONARD CROSBY, MANAGER, BRYAN COUNTY FISHERMEN'S COOPERATIVE, INC.

Mr. Crosby. Mr. Chairman, and committee, my name is Leonard Crosby. I am from Richmond Hills, Georgia, where all the shrimp fishing boats visit in the east. I am the past president of the Bryan Fishermen's Cooperative and currently serve as general manager. The Bryan Fishermen's Cooperative processes over 20 percent of the shrimp catch in Georgia each year. I am testifying on behalf of the cooperative, the Georgia Fishermen's Association, and others who depend on the shrimp industry for their livelihood.

We are concerned about the proposed regulations that would force shrimp fishermen to install turtle excluder devices, or TED's, in the nets. I was one of the six industry members in the mediation team formed by NOAA to develop a solution to the problem of incidental catch of threatened and endangered species of sea turtles in the shrimp trawl. I endorse the proposed regulations, subject to public comment, which would make it mandatory to use TED's in the south Atlantic waters at different dates and in different areas. I endorse it with a great deal of reservation. But faced with the possibility of closure or mandatory yearround use of TED's, I felt we had little choice.

I want to share my reservations with you, and I appreciate this opportunity to testify.

First, I want you to know that we support the Endangered Species Act and agree with its basic philosophy. We believe in protecting fish and wildlife species for the benefit and enjoyment of future generations. But the measures that are taken to protect these species for the future must take into account the needs of today's citizens.

We recognize that some turtles drown from being caught in shrimp nets, but we also know from published reports and observations that many sea turtles die under wheels of automobiles on beach roads after being distracted by bright lights along the seashore. We have read of thousands of sea turtles dying from explosive charges used to demolish old oil rigs in the Gulf of Mexico. We know that there has been widespread destruction of nesting habitat by beach development. We also know that consumption of turtle meat and eggs by humans in other countries are common. It is difficult to understand why the shrimp fishermen have been singled out as the main cause of sea turtle mortality.

I hope that the organizations concerned with the turtle mortality do not place restrictions on the shrimp industry simply because it is easily identifiable. I hope that they will make an effort to impose equally restrictive measures on other activities that contribute to the problem.

The TED has been renamed the "trawling efficiency device" by the National Marine Fisheries Service because it is supposed to shoo jelly balls, horseshoe crabs, and trash fish out of the net with-

out losing shrimp. If these devices are so efficient, we would be foolish not to be using them.

The truth of the matter is that the TED is not perfect. Some shrimp are lost because they go out the same hole that lets the turtle and trash out of the net. When we are facing high fuel costs, skyrocketing insurance costs, lower prices caused by imported shrimp, every pound of shrimp we lose represents about \$5. This additional burden could mean the difference between going bankrupt or saving or staying in business.

Nevertheless, we are prepared to use the TED in an effort to reduce the risk of drowning turtles. However, there is a great need to understand that sea turtles do not occur everywhere and at all times of the year. Mandatory use of TED's at all times in all areas will be counterproductive because it will result in unnecessary losses to the shrimp industry and the benefits do not warrant them.

I personally believe that in the long run education and improvement in gear technology would solve the problem, the turtle problem, far more effectively than the proposed regulations for mandatory use of TED's.

Working with the National Marine Fisheries Service and the Georgia Seagrass program, shrimp fishermen in Georgia have taken an active role in reducing turtle mortality and in developing alternatives to the National Marine Fisheries' device.

The Georgia TED is far less bulky, less dangerous to the safety of the crew, and cheaper than the National Marine Fisheries' TED. Trials carried out by Georgia Seagrass college program shows that the Georgia TED is equally effective in letting turtles out. We need the flexibility to select the TED most suitable for local fishing conditions and minimize danger to the crew, to minimize the capture of turtles, and to minimize the loss of shrimp.

While this seems to be appropriate for the Kemp's ridley turtle to be on the endangered species list, there does not seem to be significant justification for the loggerhead sea turtle to be on the threatened species list. It will improve the credibility of the Endangered Species Act if evidence could be provided to convince people that the loggerhead indeed deserves to be on the threatened species list. Right now it is a lot easier to put a species on the endangered species list than it is to remove one. There is a need for a simpler mechanism to enable a species to be removed from the list.

The shrimp industry wants to do its part to reduce turtle mortality. We ask for reason and understanding and more time to give voluntary efforts a chance to work. Some individuals and organizations think that we have had plenty of opportunity, but they do not realize the scope of the problem and the length of time it takes for the educational process to work. You can not make sweeping changes overnight in a fishery that is the most valuable fishery in the United States, a fishery that ranges from Texas to North Carolina, a fishery that involves boats ranging from 35 to 100 feet in length and a fishery that operates inshore and offshore.

We can solve the problem much easier if we work together as partners rather than as adversaries.

Thank you for the opportunity to testify.

Mr. STUDDS. Thank you very much, Mr. Crosby.

Mrs. Margie Grunert, chairman of the Texas Shrimp and Sea Turtle Survival Coalition.

Mrs. Grunert.

**STATEMENT OF MARGIE GRUNERT, CHAIRMAN, TEXAS SHRIMP
AND SEA TURTLE SURVIVAL COALITION**

Ms. GRUNERT. Good afternoon. I am Margie Tower Grunert, chairman of the Texas Shrimp and Sea Turtle Survival Coalition, a group of 600 shrimp producers, captains, and crew from Texas as well as others interested in sea turtle survival.

We feel we are on the threshold of a new concept here, the management of endangered species. We have determined that the main factor affecting the Kemp's ridley is one totally out of our control; that is, what happens in Mexico. Because the Kemp's ridley nest during the daytime, the nesting female and its eggs are highly vulnerable to natural predators such as man, who harvest the adult turtle for food, oil, and its skin for luxury products, its shell for ornamental objects.

Japan, for example, buys 50,000 to 60,000 thousand skins a year for manufacture of luxury leather items. Mexico has a protected turtle fishery. Turtle skins are for sale in border cities, and turtle oil as well can be purchased easily in any city. Turtle is commonly featured in fine restaurants, especially along the border, where the menu caters to tourists.

To the hungry poor people along the Mexican Gulf Coast, arrival of nesting females means turtle meat and eggs for hungry families. The event is anxiously greeted by those who wait for the turtles in skiffs in the shallow coastal waters and those on the beach waiting to harvest the eggs and the nesting adult females.

Indications also point to another unfortunate consequence of man's attempt to control nature. Because of the change in fishing patterns as a result of the Texas closure, shrimp that in earlier years would have been harvested in American waters migrate south and are now located in the prime area of the Kemp's ridley migration to the breeding and nesting grounds. Mexican vessels are now working that area heavily when the turtles are at their most vulnerable. As Jack Woodie, of U.S. Fish and Wildlife Service, told me, a turtle caught by a Mexican boat goes in the pot and not over the rail.

What can we do about this? Industry would like to see countries that do business with us, especially those that compete with us in the seafood markets, either initiate conservation measures immediately in a joint industry-Government funded program or face stiff embargoes to be instituted as an incentive to manage the species effectively.

What about the controllable factors? Two Federal agencies, U.S. Fish and Wildlife Service and National Marine Fisheries Service, list some 15 causes other than trawl fishing. Several of them, such as disturbance of beaches, add up to loss of habitat. Some, quite frankly, have to do with economic uses of the Gulf, especially for offshore energy production.

Some, unfortunately, have to do with man's sloth, such as plastics thrown overboard by people on vessels, including the U.S.

Navy, who throws its garbage over the rail in plastic bags that not only strangle and cause turtles to die, but porpoises and whales also.

In consultation with noted turtle expert Dr. Henry Hildebrand, we learned that another problem being encountered by the ridley is lack of food in the foraging areas. Could this be a result of dead zones that are becoming an increasing problem in the northern Gulf, where some 100,000 juvenile Kemp's ridleys are struggling against the odds? This concerns us, too, because our shrimp cannot live in that water either.

Where does the TED fit into all of this? Our coalition has taken a position that we prefer to tackle the overall problem that faces the turtle and to concentrate on enhancement of his chances to live out his life and reproduce. We feel that it is unfair to single out just one cause when we have yet to develop a management plan which prioritizes the mortality causes. Rather, we feel that the TED is a bandaid on a tourniquet case.

In addition, the TED might save a few more ridleys, but it dooms another endangered turtle, the leatherback, to certain death due to its average size of 1,000 pounds and his ferocious nature and tender, leatherlike covering. He will surely beat and tear himself to pieces, dying a horrible death in a TED from which he is too large to escape.

The TED will also help the incidental bottom sweeping that the standard rig now does, which removes one of the turtle's major enemies—plastic bags and sheets—from his environment permanently.

In conclusion, we feel that in an expanded captive breeding program, because of better nutrition and excellent care, turtles can be laying eggs at 5½ years of age. Their healthy offspring can then be returned to the wild, giving new vigor to the species. Headstart must be expanded and given priority funding instead of living on a shoestring and fighting for existence year to year, unable to make long-term-range plans.

The Endangered Species Act management plan must include comprehensive participation of industry in all turtle releases, comprehensive resuscitation and rescue procedures, evaluate and prioritize all mortality factors, address all users who contribute to mortality fairly, and offer enhancement options, including action programs and funding alternatives.

We need to abandon the quick-fix mentality. A TED might pacify a few who have come to believe that this is the only thing that can be done. However, since what we do here and now will affect more than the turtle in the future, let's bite the bullet and make significant changes in our ways of thinking about the marine environment instead of spending another \$1.6 million a year to implement a regulatory procedure that addresses only one cause of turtle mortality that isn't even in the top three, if we are honest about it.

The Texas Shrimp and Sea Turtle Survival Coalition opposes the proposed regulation due to its selective nature and insufficient statement of need and inadequate database to justify the implementation of regulations and the absence of a vehicle for the management of endangered species, some of which have critical life-cycle stages outside of the U.S. jurisdiction.

Thank you.

[The prepared statement of Ms. Grunert can be found at end of hearing.]

Mr. STUDDS. Thank you very much, Ms. Grunert.

Finally, Mr. Michael Weber, of the Center for Environmental Education.

Mr. Weber.

**STATEMENT OF MICHAEL WEBER, VICE PRESIDENT FOR
PROGRAMS, CENTER FOR ENVIRONMENTAL EDUCATION**

Mr. WEBER. Thank you, Mr. Chairman. Members of the subcommittee, I wish to thank you for allowing the Center for Environmental Education to present testimony this afternoon. With your permission, I would like to depart from my written statement.

Over the last 7 years, I have spoken with many fishermen and with many people who have spent years studying sea turtles, and the only reasonable conclusion of these investigations is that sea turtle populations in the United States are in trouble.

Let me give some examples. The nesting population of Kemp's ridley sea turtles has been reduced by 99 percent in our lifetimes. Although the species' nesting beach in Mexico has been protected for many, many years, the nesting population of Kemp's ridleys has continued to decline at a rate of 3 percent each year in the last 8 years. Fishermen out of Port Isabel, Texas, used to catch 45 to 55 Kemp's ridleys a year. Now they catch one or two.

Threatened loggerhead sea turtle populations off the Carolinas and Georgia are declining at a rate of 3 percent a year also, and this decline has taken place despite the efforts of hundreds of paid staff and volunteers who walk nesting beaches in the early morning hours and protect loggerhead nests from poachers and predators.

I am not here to ask that sea turtles be preserved simply as valuable museum pieces. In the recent past, these animals supported and nourished many people. I would like to submit for the record excerpts from a report describing turtle fisheries in the United States. As recently as 1970, more than 400,000 pounds of green turtle were landed in Florida alone. In 1974, only 9,200 pounds of green turtles were landed in Florida, and these were caught entirely in otter trawls. Though there is no legal fishing for sea turtles in the United States now, we are just as surely driving them toward extinction by fishing for shrimp.

We can end the drownings of turtles in shrimp nets. Turtle excluders exclude turtles. By using turtle excluders, the shrimp fleet can remove the gravest remaining threat to Kemp's ridley and other sea turtle populations.

The Federal Government has spent years and millions of dollars coming up with a solution to a problem that is really the shrimp fleet's problem. Now, some fishermen say they don't like the technological solution the Government came up with, and they want the Government to spend even more money to gain their acceptance. How can they be so brazen as to keep pushing off onto the rest of us a problem that they have been ignoring for so long?

And now some Gulf fishermen are attacking the agreement negotiated in good faith by industry and conservation representatives. Opponents of this agreement have known of our concern about the drowning of sea turtles, have known about the Government's turtle excluder for years. It was only when the Center for Environmental Education prepared to file a lawsuit that these fishermen decided to sit down with us.

Now, they are reneging on a commitment made to Commerce Undersecretary Calio upon which our presence at the negotiations was predicated and are sowing dissension among shrimp fishermen by means of disinformation.

Mr. Chairman, we in the environmental community have worked for many years to forge a solution to the incidental drowning of sea turtles in shrimp trawls. We have met the shrimp fleet more than halfway, but we are now being met with a campaign of disinformation.

One of the most attractive deceptions I have heard is that we can rebuild sea turtle populations by raising little turtles and releasing them to the wild. Believe me, I can understand how appealing this notion is. But I assure you, it only offers us hope. We don't know whether it works, and we won't know until a headstarted female turtle crawls up on a beach, lays eggs, and the eggs hatch into hatchlings that survive in the wild.

Furthermore, the more one-year-old Kemp's ridleys we toss into the waters of the Gulf of Mexico, the more ridley's shrimp fishermen will catch—unless they are using turtle excluders.

Another disturbing piece of disinformation has to do with the turtle excluders themselves. The proposed regulations allow use of four different excluder designs, two of which weigh less than 15 pounds and cost less than \$200 per device. Although opponents of the regulation know this, they persist in telling concerned shrimp fishermen and the press that turtle excluders weigh more than 40 pounds and cost \$450 each.

I am concerned about the effects of this disinformation upon the review of the proposed regulations. I must ask myself what others in the conservation have asked me in the past: what has been gained by compromise with the fishermen? If the agreement we negotiated in good faith dissolves because of disinformation, the answer is that there is nothing to be gained by compromise, there is nothing to be gained by seeking the middle ground.

I and other conservationists will have to ask what has been gained in the last seven years while we have negotiated, while the nesting population of Kemp's ridley sea turtles has declined another 20 percent.

Would conservation have been better served by seeking to close the shrimp fishery years ago? I still don't think so.

But now, the choice before us is clear. We can choose to risk the extinction of sea turtle populations that were once commercially abundant, or we can require TED's in some areas at some times and rebuild these populations over the next several decades.

Mr. Chairman, members of the subcommittee, I ask for your support in this endeavor. Thank you for listening. I will be happy to answer questions.

[The prepared statement of Mr. Weber can be found at end of hearing.]

Mr. STUDDS. Thank you very much, sir.

We are going to have to break in a moment for two votes on the floor. Prior to that, the gentleman from Georgia has asked that he be recognized out of order in view of the fact that he has to go to a celebration in Savannah. [Laughter.]

I am going to recognize him notwithstanding the outrageous assertion that said celebration is the largest such in the country. [Laughter.] Besides, my mother is a Murphy.

The gentleman from Georgia.

Mr. THOMAS. I am glad to hear that, Mr. Chairman. My grandmother was a Murphy as well. [Laughter.]

Since we can always take a little poetic license here in this committee, anytime at the Federal level, I still do lay claim to the fact that Savannah claims to be at least the second largest St. Patrick's Day celebration in the country.

I am very glad to see my good friend Mr. Leonard Crosby here testifying before this committee today, and I have to say that I think your testimony to me really set the course for what I think is good common sense and reason in your statements that we have been willing to go along with the inquisition into the possibility of requiring turtle excluding devices, but being sensible about it and wanting to be part of an overall effort.

On my own Georgia beaches there at Cumberland, one of our national seashores, I have been there on three different seasons now with the turtle tagging teams, tagging loggerhead turtles, and I see there on the beach the plastics that come ashore. We are dealing with that as a separate issue here, hopefully, here in this committee, I hope sometime within this calendar year, something to try to address that issue.

But also, there are issues of situations of predation on the nesting turtles on the beaches where raccoons and other animals have absolutely played havoc with the turtle population on the beach.

So I think both the testimony of Ms. Grunert and of Mr. Crosby made us very much aware of one issue that we all need to keep in mind: that, sure, we can go out there because shrimpers are accessible to where we could impose regulations if we chose to do it, but we are missing a lot of other issues that are just as important in the turtle population as is the damage that might be done, the incidental entrapment of turtles in nets.

When you look at the predation rates, if you go and work with some of these turtle teams and see what's happening to the turtles on the beaches, the lights, these other issues, they are just as important as well. And I don't think anybody can give information that is really refutive of that.

But I want to ask a couple of specific questions, if I can, hurriedly. There has been developed on the Georgia coast by a Georgia shrimp and fisherman a device called the Georgia jumper. When you hang that device up there—and I wish everyone on this committee could see the two of them, one of them up there next to the NMFS device, which is now one of the accepted devices—you see a very simple, a very safe, and a very efficient TED that can be pulled cheaply. It extrudes turtles, it catches shrimp, and

really to me quite an analogy to this very complex, heavy, dangerous, expensive device that NMFS has ruled as the accepted device at this time, or one of the accepted devices.

So I hope that everyone involved in this issue will look at these two devices and see what common sense and reason can bring and a little good Southern ingenuity, I might add there, Mr. Crosby, that came to bear in developing.

So I want you to know that as one member of this committee I am committed to seeing that at least if devices are finally required and the debate leads us to that, that we are going to have some alternatives and that we're doing to look at simple solutions and those that work as well. We have the Georgia testing done aboard the Georgia Bulldog, done by the Sea Grant system there under Dr. Chen, which shows, I think his evidence will convince all, that it is just as acceptable a device.

But, Mr. Crosby, I want to thank you for your testimony, and I think all of you here have done a great job, and I hope out of this debate comes good common sense and reason so that we can accomplish our goal without imposing any unrealistic restrictions.

I yield to the gentleman, Mr. Douglas. You seem to have something, and I have just a second.

Mr. DOUGLAS. Yes, Mr. Thomas. In order to make sure that this hearing does not foment disinformation, the Georgia jumper is one of the four certified TED's that available to the shrimpers to use under the proposed regulations.

Mr. THOMAS. Right, sir. Well, I hope my comment—I certainly was aware of that, but I wanted us to be sure that if we go to a final stage of writing regulations here, that we do give that leniency.

Mr. DOUGLAS. I am not a shrimper, but I have a sneaking suspicion if I were and were forced to use one, that probably would be my choice.

Mr. THOMAS. Thank you for your endorsement, Mr. Douglas.

Mr. STUDDS. The Chair, reeling though he is under the twin concepts of Southern St. Patrick and Southern ingenuity, is going to adjourn. We have either one or two votes, and we will resume immediately after the final vote, probably in approximately 15 minutes.

[Recess.]

Mr. STUDDS. The subcommittee will come back to order.

Thank you for my button. Anyone else who wants to contribute buttons may do so. The friendly shrimp boat shaking hands with the turtle I thought was sort of nice. [Laughter.]

Mr. Douglas, are we all here? OK. Let me start with some questions, if I may, and then we will turn it over to our friends from the Gulf.

There have been concerns raised, as you very well know, today that, among others, that sufficient evidence does not exist to tie significant sea turtle mortality to shrimp trawling. How confident are you in the studies that make that correlation?

Mr. DOUGLAS. Mr. Chairman, we are reasonably confident. There is a variety of data that are used and were used during the course of the mediated negotiations that we believe indicate the impact of shrimp trawling on turtle catch and turtle mortality.

I would have to say that the hardest data that we have on that are the observer data. Basically, that involves some 27,000 hours of observer data through three projects when NMFS observers were actually on commercial shrimp boats and actually calculating the number of turtles that were captured.

Our scientists and statisticians took that data and statistically extrapolated it into the figures that are in my testimony as to the estimated total amount of turtles that are captured in both the Atlantic and in the Gulf, which came up to over 47,000 with over 11,000 of them dying.

We have that data broken down by the Atlantic and by the Gulf and by the five different species, percentages, almost any way you want it. But in my opinion, I don't believe we can escape the fact that that is observer data, appropriately statistically handled, and I think is conclusive of the impact of the shrimp trawling on the turtles.

There are other data such as strandings data that are somewhat circumstantial because it is admitted that no one knows, when you see a turtle that's dead on the beach, necessarily how it died. Some attempts have even been made to try to do autopsies on those turtles to try to figure out how they might have died. To date, I think you can say that there has been very little success in that regard.

Nevertheless, one can look at strandings data and show during the periods of the highest numbers of strandings that that correlates very well with the highest times during which shrimping is occurring off those areas.

Again, I would not debate at all with anyone that said that it was circumstantial evidence.

There are other projects that were not conducted by NOAA that are noted in my written testimony that people have done both in the Gulf and in the South Atlantic that also relate turtle mortality to shrimp trawling. We believe there is a substantial amount of data and evidence that begins to zero in on the impact of shrimp trawls.

Mr. STUDDS. In connection with one thing you just said, in Ms. Grunert's written testimony there is the following statement, and I quote, "It has been noted by both NMFS and the shrimp industry that the highest incidence of turtle mortality coincides with the lowest point of fishing effort in the Gulf of Mexico."

How do you reconcile that statement with the correlation drawn between shrimp fishing and turtle mortality?

Mr. DOUGLAS. Mr. Chairman, I would have to go back and look at what Ms. Grunert is talking about and talk to my scientists. I can't respond to that specific a question.

Mr. STUDDS. Did I take that out of context, Ms. Grunert, or can you put it in context so that he might be able to respond?

Ms. GRUNERT. I don't have the particular data supporting that particular statement with me, but I can get it within a couple of days.

However, I was looking on the observer catch report here on Kemp's ridley in the Gulf of Mexico from 1973 to 1984. There were actually during that time period only six Kemp's ridleys caught in that observer catch report. I understand four of those were released alive.

Also, in reference to the stranding, on how they can or cannot be associated with the shrimping industry, I have an article here from Offshore, November 1986, and I would like to read you a quote: "The curtailment or reconsideration of the use of explosives follows the die-off of 138 endangered sea turtles, 17 pre-born porpoises, and other assorted marine life off the upper Texas coastline earlier this year."

I understand Greenpeace has been trying to get information on rig removals. I have a partial list of the rigs removed in the last 2 years. All 150 removals, all but 23 were inside of 60 fathoms. I think that will show—I mean, 60 feet, I am sorry, 10 fathoms.

Also, in Michael Weber's booklet "Beach Buddies," he talks in here about other causes of turtle mortality which is one of the things that I have requested on research is a correlation between marine mammal strandings and turtle strandings because people know that the dolphins do not die in shrimp trawls. When both of these show on the beach at the same time, there is another cause.

Mr. Weber's book refers to causes of mortality in turtles, debris items such as fishing nets, monofilament fishing lines, plastic strapping bands, and ropes, plastic onion sacks, tar balls that seal their mouths shut. Other turtles in Texas have been found to have ingested tar, plastic bags, pieces of plastic bottles, parts of beer cans, and even a milk carton.

I would like to request that all turtles, no matter what condition they are in, at least have their stomachs opened to examine contents.

Mr. STUBBS. OK. I just wanted to focus on that apparent contradiction between what the two of you were saying. You may want to go back and look at your respective data.

Before we get into a complete melee here, Mr. Douglas, there have also been statements, as you very well know, that the use of these devices—and I am still searching for a better acronym; there is a contest going up here—will significantly reduce the catch of shrimp. How confident are you in your evidence or your contention that shrimp loss is not associated with the use of whatever we finally call these things?

Mr. DOUGLAS. Yes, sir. Let me take a moment to characterize basically what we do when we test the TED's. First of all, the TED is tested for turtle exclusion in the Cavaneral ship channel, not elsewhere. The reason for that is that that is the one place that we know, particularly during certain times of the year, you can go and encounter enough turtles to get a statistically valid comparison between one net with a TED and one net without a TED.

To do that elsewhere, to gain or catch enough turtles in the non-TED net so as you feel like you have a statistically valid test, would take an extremely long period of time. So that is one test that is done.

The second test, and what I think most people are concerned about, is shrimp retention. That was done by NMFS on the NMFS TED—we have not tested the other TED's; it's been tested in a couple of other areas by other people—in the offshore areas, offshore waters of almost every State in what we believe are representative shrimping grounds. What you do is put over two nets, one with a TED and one without, and tow whatever you think is the

required number of tows and begin to count up what the shrimp retention and shrimp loss is and compare it.

For your information, there has been on the present design of TED, 3,800 hours of effort testing on shrimp. Incidentally, on turtles the figure comes out 97.7 percent exclusion; that's why we're saying, in excess of 97. But in five different tests, the results were this: in one of the tests there was a minus 0.8 percent, eight-tenths of percent, loss of shrimp. In another test it was plus 7.5 percent. In another test it was plus 7.5 percent.

Mr. STUDDS. What is a negative loss? Is that a double negative?

Mr. DOUGLAS. Well, minus from zero. In other words, there was a loss from—the TED side caught 0.8 percent less shrimp than the non-TED side.

Mr. STUDDS. OK.

Mr. DOUGLAS. That was minus 0.8, plus 7.5, plus 7.5, plus 5.3, minus 1.5 in the five tests we did.

Now, my statisticians tell me that all of those figures are statistically insignificant. By that I mean that this would be within the realm of what one might expect is a normal variation between any two nets that are being fished. This is why we come up with the statement that on our tests there has been essentially no shrimp loss. It might even show a shrimp gain.

That is the best data we have, and that's what we're relying on. There have been some tests in Georgia on all four TED's. I don't have the results of those with me. There were some tests in South Carolina on at least a couple of the TED's. There will be tests done in the inshore waters of North Carolina this summer that they have promised us, and this too, we will look at how it operates and give you a comparison of shrimp loss or gain or whatever it might be between the TED's in that area.

And we have just asked LSU through our Sea Grant component, not the Fisheries Service, to undertake with the Fisheries Service but primarily under the LSU Sea Grant, to test all four of the TED's in inshore Louisiana waters.

The test was scheduled in April however, I must say, Mr. Tauzin, that now that we have asked them to test all four, it may take a little while longer. But certainly we hope that can get underway just as soon as possible.

So this is the data upon which we are relying when we say to you that our tests show no significant loss in shrimp.

Mr. STUDDS. I appreciate that.

My time has more than expired.

The gentleman from Texas.

Mr. ORTIZ. Thank you, Mr. Chairman.

Mr. Douglas, another major concern of mine is testing. I understand that you are testing for turtle exclusions off Cape Canaveral, Florida. However, conditions are not the same in the Gulf. We have a trash problem that could possibly change the results. How many turtles have been caught in the TED in the Gulf? Can you give us an estimate?

I think that the Florida coastline and what we have in the Western Gulf are totally different. I think that we have more accumulation of trash in our part of the Gulf, and therefore you are still

trying to compare the figures that you come up with, and all I want to know is how many turtles have been picked up.

Mr. DOUGLAS. Well, let me go back and explain that in trying to determine whether the devices will or will not exclude a turtle, we have to go to where we know we are going to get turtles. I am not a statistician, so I can't really speak to how many tows and how many turtles one really has to achieve. But the only place we know that we can absolutely count on getting a significant number of turtles to make the tests statistically significant is in the Cape Canaveral channel.

Mr. ORTIZ. So are you trying to tell me now that we don't have turtles in the Gulf?

Mr. DOUGLAS. No, sir.

Mr. ORTIZ. That's why we don't need tests?

Mr. DOUGLAS. No, sir. But to make it statistically valid—and this becomes a very tricky situation—you might have to pull a TED a year or more or 2 years in the Gulf because of, admittedly, the individual shrimper catches very few turtles in the Gulf. It's just a matter of the number of shrimpers and the effort that's out there, when you add it up, it becomes a significant factor.

So in order to get a statistically significant valid test, one would just have to pull for a long period of time. That really is economically, you know, beyond our capabilities.

The wildlife experts and the biological experts on turtles clearly believe that if a TED will exclude a turtle one place, it will exclude a turtle another place. However, I admit, Mr. Ortiz, that if you get into an area where you have trash that clogs your TED, you're not going to exclude a turtle. No question about that.

But the shrimper is protected from that if these kinds of regulations were to go in place because if he's using a TED in an area where a TED is required and happens to catch a turtle, then he is no longer subject to the Endangered Species Act. That's one of the advantages that I believe the shrimper has.

Incidentally, it would also follow that if a shrimper were in an area where no TED were required and he were without a TED, and caught a turtle, he again would be exempted from prosecution under the Endangered Species Act. This is one of the critical factors of the regulations that I think is undoubtedly a plus factor for the shrimper. I hope that explains it.

Mr. ORTIZ. Well, how many have you caught in the Gulf by using the TED's? How many turtles have you caught? Can you give me an idea, because I go back and I look at your statement and you say the Gulf of Mexico shrimp fleet project 1973 to 1978 in which a total of 2,617 observed trawling hours, you only captured or they only captured three sea turtles.

Mr. DOUGLAS. Yes. Let me ask one quick question.

[Pause]

Mr. DOUGLAS. The observer data come from three projects. There was an incidental catch mortality project from 1979 to 1981 that had 10,905 observer hours and 318 turtles were caught. That is the Gulf of Mexico and south Atlantic. If you want that broken down, I will have to get that for you a little later as to how many in the Gulf and how many in the south Atlantic.

Mr. ORTIZ. Sure. You could supply that for the record. I will appreciate that.

Mr. DOUGLAS. Sure.

[The information to be supplied follows:]



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

MAR 20 1988

Honorable Gerry E. Studds,
 Chairman, Subcommittee on Fisheries and Wildlife
 Conservation and the Environment
 House of Representatives
 Washington, D.C. 20515

Dear Mr. Studds:

This letter and its attachments are provided for the Hearing Record for the Subcommittee's hearing on March 17, 1987, on reauthorization of the Endangered Species Act. They are in response to requests for additional data from Congressmen Billy Tauzin and Solomon Ortiz during the appearance of James E. Douglas, Jr., Deputy Assistant Administrator for Fisheries, as a member of the TED panel and provide information clarifying the basis for NMFS estimates of turtle catch and mortality.

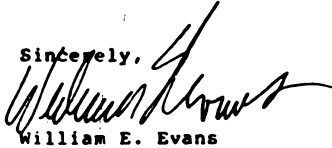
We were requested to provide a more detailed breakdown and explanation of observer data used by NMFS. For that analysis, the Gulf of Mexico and South Atlantic Ocean were divided into statistical zones as shown in Figure 1. Table 1 shows total fishing effort by season in the Gulf, estimated from interviews with vessel captains. Total NMFS observer effort in all statistical areas, by season, is shown in Table 2. Tables 3-7 show the catch and mortality, by area, and by season, for all statistical areas, for each species of sea turtle. Table 8 shows depth and tow times, and the final page is Figure 2, showing mortality rates as a function of tow times.

The data in these tables differs from the gross figures presented in the testimony. Our scientists considered 850 of the hours and 309 of the turtles caught was under circumstances highly atypical of commercial shrimping practices. Therefore, in order not to bias the resulting estimate, our scientists subtracted that data from the gross figures before computing the estimates. The estimated total catch of all turtles in the Gulf and South Atlantic of 47,661 and mortality of 11,427, as presented, is the scientific estimate derived from the adjusted data in these tables.



Thank you for the opportunity to provide this additional information and to clarify the scientific basis for the estimates made by NMFS.

Sincerely,

A handwritten signature in dark ink, appearing to read 'William E. Evans', written over the typed name.

William E. Evans
Assistant Administrator
for Fisheries

Enclosures

cc: Honorable Billy Tauzin
Honorable Solomon Ortiz

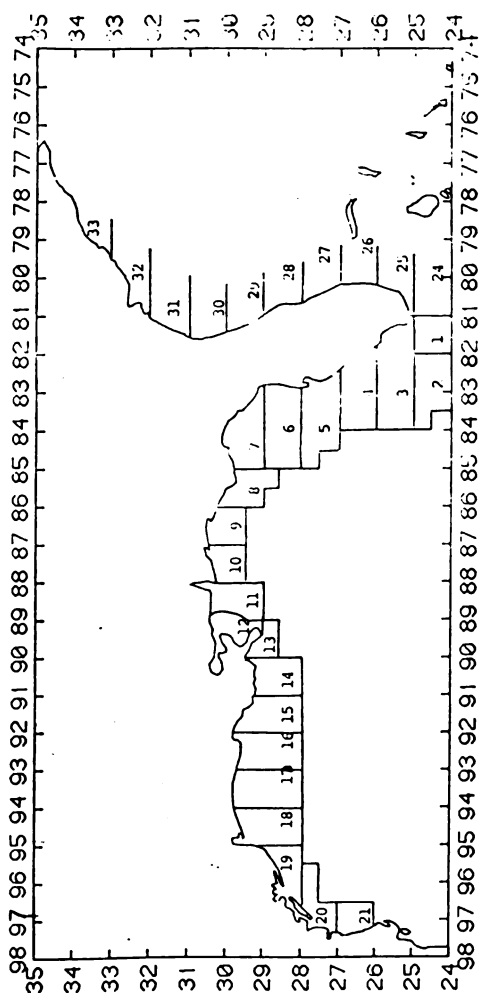


Figure 1. Shrimp statistical zones in the Gulf of Mexico and South Atlantic.

Table 1. Total fishing effort (standardized to 30.5-m headrope length net hours) in the offshore Gulf of Mexico by statistical zone and season.*

Statistical Zone	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.	Totals
1	4,831	3,798	810	1,385	10,824
2	121,731	93,255	43,584	70,033	328,604
3	30,984	22,741	6,154	14,504	74,383
4	17,525	22,284	6,076	12,566	58,451
5	5,501	17,988	4,261	6,099	33,849
6	7,070	20,474	7,634	8,333	43,511
7	7,093	38,708	7,847	8,260	61,908
8	1,865	7,590	11,946	9,835	31,236
9	11	229	6	11	257
10	0	1,189	3,848	357	5,394
11	32,118	71,050	94,958	93,411	291,537
12	2,916	25,154	24,612	34,071	86,753
13	27,092	132,661	109,920	133,538	403,211
14	26,913	87,458	76,550	70,525	261,446
15	68,727	115,404	134,030	186,504	504,665
16	36,100	76,763	144,512	130,662	388,037
17	47,650	99,834	145,076	127,602	420,162
18	30,348	24,808	144,568	112,349	312,073
19	39,155	32,509	215,473	179,077	466,214
20	20,787	26,863	121,866	81,979	251,495
21	27,913	39,362	125,446	90,167	282,888

* Data provided by the National Marine Fisheries Service, Southeast Fisheries Center, Galveston Laboratory. Data were standardized by multiplying hours of effort by 35.47/30.5.

Table 2. Total MFS observer sampling effort by statistical zone and season standardized to 30.5-m headrope length net hours.

Statistical Zone	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.	Totals
1	312	109	9	0	430
2	1,448	4	37	45	1,534
3	312	2	0	46	360
4	75	45	48	12	180
5	4	0	0	2	6
6	0	26	0	16	42
7	0	9	18	10	37
8	21	7	0	6	34
9	0	0	0	0	0
10	18	12	26	19	75
11	67	595	383	53	1,098
12	0	256	112	18	386
13	3	304	303	657	1,267
14	111	132	126	184	553
15	417	27	375	300	1,119
16	154	114	340	400	1,008
17	58	155	316	364	813
18	20	113	1,856	1,754	3,743
19	7	178	1,503	1,468	3,056
20	4	120	286	662	1,072
21	31	116	66	155	368
22	0	0	1	13	14
23	0	0	0	0	0
24	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
27	27	2	0	0	29
28	90	70	5	63	218
29	12	13	5	56	86
30	0	192	429	70	691
31	0	704	3,431	1,746	5,881
32	0	159	857	435	1,451
33	0	51	1,351	185	1,587
Gulf	3,062	2,124	5,825	5,774	16,785
East Coast	1,119	1,181	6,078	2,555	9,943
Total	3,181	3,315	11,903	8,329	26,728

Table 3. Hawksbill turtle, Eretmochelys imbricata, captures and mortality by statistical zone and season.

Statistical Zone	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.	Totals
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	0	0	0	0	0
16	0	0	0	0	0
17	0	0	0	0	0
18	0	0	0	0	1
19	0	0	1	0	1
20	0	0	0	0	0
21	0	0	0	0	0
22	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
27	0	0	0	0	0
28	0	0	0	0	0
29	0	0	0	0	0
30	0	0	0	0	0
31	0	0	0	0	0
32	0	0	0	0	0
33	0	0	0	1	1
Gulf	0	0	1	0	1
East Coast	0	0	0	1	1
Total	0	0	1	1	2

Table 4. Loggerhead turtle, *Caretta caretta*, captures and mortality by statistical zone and season.

Statistical Zone	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.	Totals
1	4 (1 dead)	0	0	0	4 (1 dead)
2	4	0	0	0	4
3	2	0	0	1	3
4	1	0	0	0	1
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	4 (1 dead)	0	0	4 (1 dead)
12	0	0	2 (1 dead)	0	2 (1 dead)
13	0	0	0	1	1
14	0	0	0	1 (dead)	1 (dead)
15	0	0	1	0	1
16	0	2 (1 dead)	2	0	4 (1 dead)
17	0	0	0	0	0
18	0	0	0	1	1
19	0	0	3	2 (1 dead)	5 (1 dead)
20	0	0	1 (dead)	6 (3 dead)	7 (4 dead)
21	0	0	0	1	1
22	0	0	0	2 (2 dead)	2 (2 dead)
23	0	0	0	0	0
24	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
27	0	0	0	0	0
28	21	10	7	0	44 (1 dead)
29	1	0	1 (dead)	6 (1 dead)	8 (3 dead)
30	0	22 (6 dead)	39 (15 dead)	0	10 (4 dead)
31	0	36 (12 dead)	160 (59 dead)	0	61 (21 dead)
32	0	23 (8 dead)	31 (13 dead)	29 (2 dead)	225 (73 dead)
33	0	2 (1 dead)	72 (15 dead)	13 (2 dead)	83 (21 dead)
Gulf	11 (1 dead)	6 (2 dead)	10 (2 dead)	15 (7 dead)	42 (12 dead)
East Coast	22	93 (27 dead)	310 (103 dead)	65 (8 dead)	490 (138 dead)
Total	33	99 (29 dead)	320 (105 dead)	80 (15 dead)	532 (149 dead)

Table 5. Kemp's ridley turtle, Lepidochelys kempi, captures and mortality by statistical zone and season.

Statistical Zone	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.	Totals
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	0	0	0	0	0
16	0	1 (dead)	0	1 (dead)	2 (dead)
17	0	0	0	0	0
18	0	0	1	1	2
19	0	0	0	2	2
20	0	0	0	0	0
21	0	0	0	0	0
22	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
27	0	0	0	0	0
28	1	0	1	0	2
29	0	0	0	0	0
30	0	0	0	0	0
31	0	0	9 (3 dead)	4	13 (3 dead)
32	0	3 (1 dead)	1 (dead)	1	5 (2 dead)
33	0	0	0	0	0
<hr/>					
Gulf Coast	0	1 (dead)	1	4 (1 dead)	6 (2 dead)
East Coast	1	3 (1 dead)	11 (4 dead)	5	20 (5 dead)
Total	1	4 (2 dead)	12 (4 dead)	9 (1 dead)	26 (7 dead)

Table 6. Green turtle, *Chelonia mydas*, captures and mortality by statistical zone and season.

Statistical Zone	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.	Totals
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	1	0	0	1
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	0	0	0	0	0
16	0	0	0	0	0
17	0	0	0	0	0
18	0	0	0	0	0
19	0	0	1	0	1
20	0	0	0	0	0
21	0	0	0	0	0
22	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
27	0	0	0	0	0
28	0	0	0	0	0
29	2	1	0	0	3
30	0	0	0	0	0
31	0	1 (1 dead)	0	0	1 (1 dead)
32	0	0	1 (1 dead)	0	1 (1 dead)
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
44	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
47	0	0	0	0	0
48	0	0	0	0	0
49	0	0	0	0	0
50	0	0	0	0	0
51	0	0	0	0	0
52	0	0	0	0	0
53	0	0	0	0	0
54	0	0	0	0	0
55	0	0	0	0	0
56	0	0	0	0	0
57	0	0	0	0	0
58	0	0	0	0	0
59	0	0	0	0	0
60	0	0	0	0	0
61	0	0	0	0	0
62	0	0	0	0	0
63	0	0	0	0	0
64	0	0	0	0	0
65	0	0	0	0	0
66	0	0	0	0	0
67	0	0	0	0	0
68	0	0	0	0	0
69	0	0	0	0	0
70	0	0	0	0	0
71	0	0	0	0	0
72	0	0	0	0	0
73	0	0	0	0	0
74	0	0	0	0	0
75	0	0	0	0	0
76	0	0	0	0	0
77	0	0	0	0	0
78	0	0	0	0	0
79	0	0	0	0	0
80	0	0	0	0	0
81	0	0	0	0	0
82	0	0	0	0	0
83	0	0	0	0	0
84	0	0	0	0	0
85	0	0	0	0	0
86	0	0	0	0	0
87	0	0	0	0	0
88	0	0	0	0	0
89	0	0	0	0	0
90	0	0	0	0	0
91	0	0	0	0	0
92	0	0	0	0	0
93	0	0	0	0	0
94	0	0	0	0	0
95	0	0	0	0	0
96	0	0	0	0	0
97	0	0	0	0	0
98	0	0	0	0	0
99	0	0	0	0	0
100	0	0	0	0	0
Gulf Coast Total	0	1	1	0	2
	2	3 {1 dead}	4 {1 dead}	1	5 {2 dead}
				1	11 {2 dead}

Table 7. Leatherback turtle, Dermochelys coriacea, captures and mortality by statistical zone and season.

Statistical Zone	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.	Totals
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	1 (dead)	0	0	1 (dead)
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	0	0	0	0	0
16	0	0	0	0	0
17	0	0	0	0	0
18	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
21	0	0	0	0	0
22	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
27	0	0	0	0	0
28	0	0	0	0	0
29	0	0	0	0	0
30	0	3 (1 dead)	0	0	3 (1 dead)
31	0	0	0	0	0
32	0	0	0	0	0
33	0	0	0	0	0
Gulf Coast	0	1 (dead)	0	0	1 (dead)
Fast Coast	0	3 { 1 dead }	0	0	3 { 1 dead }
Total	0	4 { 2 dead }	0	0	4 { 2 dead }

Table 8. Mean depth (m) and tow time (mins.) for all tows (N) by statistical zone.

Depth (meters)					Mins. fished				
Stat. zone	N	Mean	Std. error of mean	Range	Mean	Std. error of mean	Range		
1	139	15.5	0.46	2-64	203.8	6.26	90.0-385.0		
2	569	26.6	0.24	18-46	263.1	4.52	10.0-745.0		
3	133	24.0	0.64	15-53	209.3	8.76	30.0-430.0		
4	97	12.5	0.36	2-22	137.9	8.16	30.0-360.0		
5	16	7.1	0.60	2-11	50.0	6.16	35.0-135.0		
6	17	8.2	2.86	2-51	157.5	9.64	28.0-200.0		
7	35	6.3	0.36	4-11	144.9	9.24	30.0-225.0		
8	22	7.9	0.53	4-11	130.6	19.45	10.0-350.0		
9	0	0	0	0	0	0	0		
10	54	8.1	0.43	2-15	174.7	9.11	10.0-300.0		
11	564	20.4	0.77	4-84	119.0	4.79	8.0-605.0		
12	157	7.5	0.29	2-15	136.7	6.01	10.0-355.0		
13	524	23.3	0.88	2-91	125.2	4.34	10.0-567.0		
14	326	18.7	1.20	2-99	102.3	5.70	10.0-502.0		
15	487	22.1	0.91	2-90	151.4	5.81	10.0-600.0		
16	245	13.4	0.82	2-119	246.6	8.25	10.0-750.0		
17	230	12.0	0.56	4-64	239.6	9.31	10.0-535.0		
18	1471	10.2	0.14	2-42	223.2	2.62	10.0-720.0		
19	610	16.8	0.36	2-62	238.1	5.07	10.0-840.0		
20	205	25.8	0.85	4-77	259.9	12.42	10.0-815.0		
21	89	27.7	1.12	7-73	269.4	23.16	10.0-840.0		
22	4	25.6	5.33	16-37	210.0	104.64	30.0-420.0		
23	0	0	0	0	0	0	0		
24	0	0	0	0	0	0	0		
25	0	0	0	0	0	0	0		
26	0	0	0	0	0	0	0		
27	7	31.9	5.19	11-42	160.0	10.12	120.0-185.0		
28	59	17.8	1.38	7-46	143.4	8.15	26.0-305.0		
29	25	14.0	.60	7-16	136.6	11.43	50.0-240.0		
30	415	8.0	.15	4-16	146.0	3.29	15.0-370.0		
31	3827	5.0	.04	2-49	144.6	0.85	10.0-567.0		
32	694	5.7	.06	2-11	143.9	1.49	10.0-250.0		
33	490	5.9	.10	2-13	147.4	1.88	25.0-330.0		

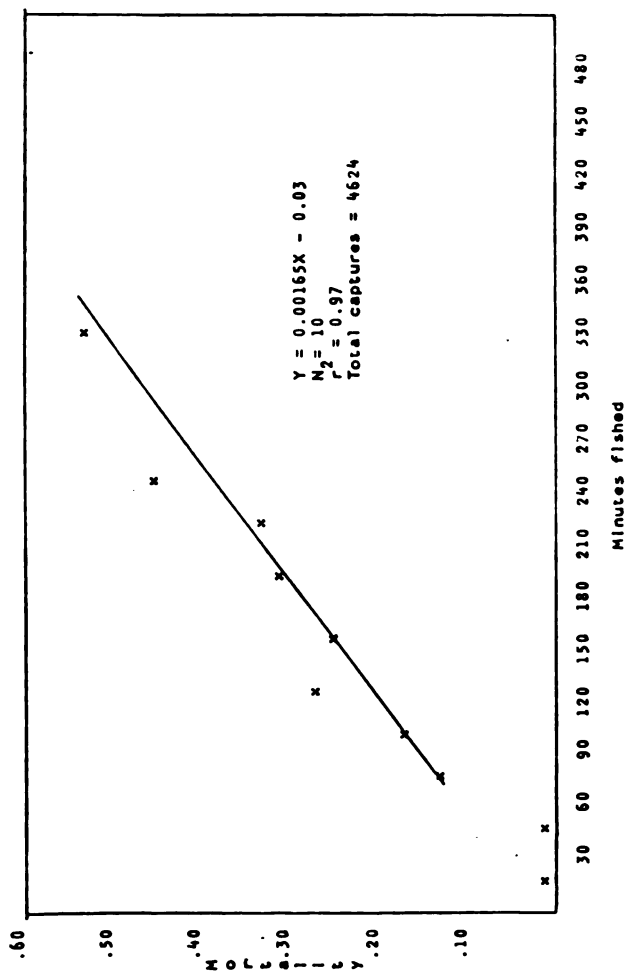


Figure 2. Relationship of length of tow to mortality in sea turtles. Turtles were grouped by 30-minute increments and mean mortality computed. Ten unweighted means were regressed.

Mr. DOUGLAS. There was an excluder trawl project—that is, when we went out and tested excluder trawls—that also gave us an opportunity, in a normal testing procedure, to see how many turtles were picked up: 14,000 observer hours, captured 563 turtles. That also was in both the Gulf and the south Atlantic.

There was a discard project of 2,600 hours both in the Gulf and in the south Atlantic in which only three turtles were caught.

It is from the combination of those three that we have developed the figures that are in our report of 47,000 turtles plus 11,000—some mortality. There are mortality figures that are attached to this as well. That is an extrapolated figure, statistically extrapolated. But we can give you that data, Mr. Ortiz, broken down by Gulf and south Atlantic. There are more turtles intercepted in the south Atlantic than there are in the Gulf. No question. Statistics show that.

Mr. ORTIZ. How many of these turtles were dead?

Mr. DOUGLAS. Well, of those that were caught?

Mr. ORTIZ. Yes, of those that were caught.

Mr. DOUGLAS. The extrapolation shows 11,000—and some would die in toto, but you're talking about just of those?

[Pause.]

Mr. DOUGLAS. We can get that for you.

Mr. TAUZIN. You don't have information as to how many of the turtles that you caught in these three tests were dead and how many were alive?

Mr. DOUGLAS. Of the 52 turtles caught, 14 were dead at time of capture.

Mr. TAUZIN. Do you have any remembrance of what percentage it was?

[Pause.]

Mr. ORTIZ. Would the gentleman like to answer either of the questions that the gentleman just asked?

Mr. DOUGLAS. I think we can get it for you.

Mr. WEBER. If I may?

Ms. GRUNERT. I have an experience I can share with you.

Mr. STUDDS. The gentleman from Texas has the floor. He may do within reason what he wishes with it.

Mr. ORTIZ. While he's looking for that, you know, I get misquoted by the paper a lot, Mr. Douglas, but this morning's paper stated, and I quote, "The fishery will be closed." Do you agree?

I think this is Mr. Weber that said this, and like I said now, Mr. Weber, I have been misquoted many, many times by the local newspapers, but you are quoted as saying that the alternative to TED's is—and I quote—"The fishery will be closed." Do you agree that is what is going to happen? Did they quote you right when you said that?

Mr. WEBER. I may have been quoted out of context. I don't recall that conversation. I haven't seen that article. When we sent a letter to the Secretary of Commerce back on August 22, we said that in order to comply with the Endangered Species Act, he should do one of two things: require TED's in the fishery, or close the fishery.

Technically, under section 9 of the Endangered Species Act, the capture of an endangered sea turtle, is a violation of that act, and it was our view that turtles were being regularly captured in the

fishery, that therefore there were regular violations of the act, and that either TED's should be required, in order to avert those violations or, alternatively, the fishery should be closed.

We presented that argument in our letter, and at the same time told Undersecretary of Commerce Calio that we were interested in conducting additional negotiations with the industry to come to some resolution short of closing the fishery, which is not a desirable end, in our view. For that reason, we desired to enter into negotiations. We did so, and came up with the agreement.

Mr. ORTIZ. Do you have your numbers now, Mr. Douglas?

Mr. DOUGLAS. Yes, sir. Of the figures that I quoted you in the three projects, it should total 575 total caught in the South Atlantic and Gulf. The Gulf was 52 caught. Of that, 42 were loggerheads. Of the 42 loggerheads, 12 were dead. Six were Kemp's ridleys. Of the Kemp's ridley six, two were dead. Of the others, green, hawksbill, and leatherback, there were only four in total, and none of them were dead.

Mr. ORTIZ. Thank you.

Mr. STUDDS. Just as a matter of technicality, the time now switches to the gentleman from Louisiana, but I know that the Gulf views this as a technical distinction.

Mr. ORTIZ. I am sorry.

Mr. STUDDS. That's quite all right. I am just trying to do it within reason. We will come back again. I know this is important to you, and I am sure you have many more questions.

Mr. TAUZIN. Well, I just did a quick study. That is to say that in 27,000 hours of observed towing in the Gulf—that included, that is, some towing; I don't know how many hours in the Gulf—but you produced two dead Kemp's ridley turtles? Is that correct?

Mr. DOUGLAS. Yes, except, as you understand, the 27,000 hours is the total in the South Atlantic and Gulf.

Mr. TAUZIN. Yes.

Mr. DOUGLAS. I don't have that immediately before me as to what the breakout is.

Mr. TAUZIN. Well, I think it would be useful for us to have that number. I know you don't have it now, but if you would supply it later.

Mr. DOUGLAS. Surely.

Mr. TAUZIN. The number of actual hours that were used in the Gulf of Mexico.

Mr. DOUGLAS. Yes, sir.

Mr. TAUZIN. And obviously, since there were 42 loggerheads involved, obviously a lot of those hours were spent off of Florida; is that correct?

Mr. DOUGLAS. Do we have it broken down by area?

Mr. TAUZIN. The point is, in reference to understand these statistics, Mr. Douglas, I think it would be useful for us to have some better breakdown of where the hours were spent and what turtles were caught and where the two Kemp's ridley turtles were actually caught.

Mr. DOUGLAS. Yes, sir. We will get that to you. That's what we're here for.

[Committee note: Please refer to Tables 1 through 8 of the previous insert.]

Mr. TAUZIN. Is it correct to say that the rule that is being promulgated by NMFS is the rule that flows from the negotiated agreement of January 1987?

Mr. DOUGLAS. Yes, sir, that regulation, in fact, absolutely captures that agreement.

Mr. TAUZIN. And that agreement includes an exemption for North Carolina inshore; is that correct?

Mr. DOUGLAS. There is no requirement in that rule to go into North Carolina inshore; that's correct.

Mr. TAUZIN. And I suppose that is based upon data that indicates, as you indicated, observer coverage is the principal data upon which you founded the conclusion that netting was dangerous to the turtles.

I look in the draft supplement to the final environmental impact statement, and on page 43 is the statement, "Observer coverage for all these projects was primarily in offshore waters." Again, on page ii, there is a statement that, "There are no estimates of total catch and mortality of sea turtles in inshore waters," indicating you had little or no evidence or information regarding turtle mortality in inshore waters.

Is that the basis upon which the North Carolina inshore waters exemption is contained in the regulation?

Mr. DOUGLAS. Speaking specifically to North Carolina, the negotiating group didn't really get to North Carolina and left that hanging. It was determined after talking with them that we would do what we've done in the regulations; that is, not require it in inshore North Carolina. North Carolina is for all intents and purposes the only State that has an inshore fishery on the east coast because the Georgia and South Carolina areas—

Mr. TAUZIN. There is an inshore fishery, of course, off Louisiana.

Mr. DOUGLAS. Absolutely, yes, sir.

Mr. TAUZIN. For which there is equally no information whatsoever regarding mortality rates inshore. I understand no testing was done inshore.

Mr. DOUGLAS. That's correct.

Mr. TAUZIN. Why is inshore Louisiana included in this regulation and inshore North Carolina excluded from the regulation?

Mr. DOUGLAS. Well, there are several reasons for that, and perhaps the two gentlemen who were part of the negotiation might be able to respond.

Mr. TAUZIN. Well, I am asking you for a scientific reason.

Mr. DOUGLAS. I understand that.

Mr. TAUZIN. Is there a scientific reason for including inshore Louisiana and excluding inshore North Carolina when you have no evidence in either case?

Mr. DOUGLAS. Well, there are several scientific reasons. How strongly you want to weight them, of course, is up to you or whoever is looking at it. First of all, turtles do occur in inshore waters. We have data—

Mr. TAUZIN. They occur in inshore North Carolina waters.

Mr. DOUGLAS. That's correct. Habitat is very good in inshore waters. That would lead you to believe that turtles would be there. You can therefore assume that turtles would be susceptible to shrimp trawling in inshore waters as well.

Mr. TAUZIN. You would assume that in North Carolina as in Louisiana?

Mr. DOUGLAS. That's correct. Now, when we looked at data in North Carolina, one of the interesting things that we saw was that it—and there is very little data available—indicated that shrimp trawling in North Carolina did not seem to be a major factor for any mortality or catch of turtles in their inshore water, what little bit we had. Gill nets, as a matter of fact, emerged as the number one villain, if you want to call it that, in North Carolina inshore waters.

Mr. TAUZIN. Mr. Douglas, how do you know that greater mortality of turtles were attributable to shrimping in inshore waters in Louisiana any more than you had in North Carolina?

Mr. DOUGLAS. I would say that its reasonably comparable.

Mr. TAUZIN. Reasonably comparable, and yet the rule treats one differently from the other.

Mr. DOUGLAS. That's correct.

Mr. TAUZIN. What is the scientific basis upon discriminating against one part of the country and another in your regulations?

Mr. DOUGLAS. I just tried to give you as much science as we have behind that.

Mr. TAUZIN. That is all you've got, that they're comparable information backing up the decision in both cases? One was covered, one was not?

Mr. DOUGLAS. Excuse me.

[Pause.]

Mr. DOUGLAS. Let me, if I might, Mr. Chairman, during the turtle negotiations—and one of the problems in any kind of negotiated agreement is that some of the negotiations go on and you don't quite understand exactly all of the rationale that may be behind the particular decision. In the negotiations, I was there for the first three sessions. Mr. Johnson, who is here, was there for the final session. He might be able to add to it. Two folks here were there, one on the environmental——

Mr. TAUZIN. Mr. Douglas, I am not concerned at this point about what happened in negotiations. I am concerned about the scientific basis upon which you based the regulation.

Mr. DOUGLAS. I understand.

Mr. TAUZIN. You tell me that the conditions are comparable, you have included one in one area of your regulation and you have excluded the other. You even admitted that the negotiations didn't even cover the North Carolina situation. You decided apparently on your own to exclude it. Mr. Douglas, please, sir?

[Pause.]

Mr. DOUGLAS. I was just asking Mr. Johnson whether he had any scientific evidence coming out of the fourth session, and he says no.

Mr. TAUZIN. So we have no scientific evidence to back up the decision to include the Louisiana inshore and to exclude the North Carolina?

Mr. DOUGLAS. Only that which I have given you, which is that we know turtles are there, we know that the habitat is there.

Mr. TAUZIN. But you know that in both cases. You know they're there in both cases.

Mr. DOUGLAS. Right.

Mr. TAUZIN. But you made a different decision.

Mr. DOUGLAS. Yes. Yes, sir.

Mr. TAUZIN. All right. You also made a decision to apparently—or rather, the negotiating team made decisions—based upon, I suppose, the agreement of people to sign or not sign the document; is that correct?

Mr. DOUGLAS. I am sorry, would you repeat that, sir?

Mr. TAUZIN. Were there any agreements made in the negotiations that now form part of this Government regulation that are based upon the decision of anyone to sign or not sign the document when it was completed?

Mr. DOUGLAS. There was the thing called the "Louisiana variable" that the negotiating group put into the agreement. There had been no decisions made on the Government that would—

Mr. TAUZIN. Let me read the Louisiana variable to you, and I want your comment on it.

Mr. DOUGLAS. Yes.

Mr. TAUZIN. I will read it verbatim and from the report. It says, "If the representative of the concerned shrimpers of Louisiana"—parenthetically, Mr. Tee John Mialjevich—

Mr. DOUGLAS. Right.

Mr. TAUZIN [continuing]. Is willing to sign and endorse the entire agreement, the following provisions shall be incorporated into the agreement. If the representative is unwilling to sign and endorse the entire agreement, the following provisions shall not be incorporated into the agreement."

Now, as I read the following provision, it would have given Louisiana an added exemption of trawls up to 39 feet as opposed to the exemption you provide of 30 feet, and it would have given 2 more years of time before the requirement was put into effect.

Am I to conclude from that language that Mr. Mialjevich was told that, "Either you sign or you don't get this additional exemption"?

Mr. DOUGLAS. I would like to ask—

Mr. TAUZIN. Well, you were part of those negotiations, Mr. Douglas. I would like to ask you first.

Mr. DOUGLAS. No, sir.

Mr. TAUZIN. Is that what happened in these negotiations and the agreement? Am I correct in my interpretation: "Mr. Mialjevich, either you sign the entire agreement or this exemption for Louisiana will not be included in the rule or regulation"?

Mr. DOUGLAS. Let me say again, Mr. TAUZIN, I understand exactly where you're coming from, that this was put in in the fourth session. Mr. Johnson was representing us. I was not. Maybe the environmental community that made that offer can further expand on why it is.

Mr. TAUZIN. Mr. Douglas, that is a nice term, "offer." It sounds more like a threat than an offer. It says if you sign you get this agreement included, if you don't we exclude it. It almost reads like blackmail, if you would. It looks awful, and I just wanted your interpretation of it.

Is the Government of the United States going to propose a rule affecting an industry in Louisiana based upon this negotiated agreement that included a provision that if you don't sign the

entire agreement we're going to take something out that may or may not have any scientific basis to it?

Mr. DOUGLAS. Well, I think it's more a matter of whether you're going to put something in. Let me say that I don't know what we're going to do, because the Government's final decision has not been made, as you understand. We are going through the process of public hearings, so I can't really comment as to what we may or may not do. You know, I would hope that comments that come out here as well as in public hearings—

Mr. TAUZIN. Mr. Douglas, I would hope that the Government proposes a rule or regulation based upon scientific evidence and not upon the notion of whether someone yielded to blackmail in the negotiation. I would hope that is going to be true.

Mr. DOUGLAS. Let me ask Mr. Johnson, who was there.

Mr. TAUZIN. I would suggest that maybe Mr. Johnson ought to comment.

Mr. DOUGLAS. Mr. Johnson was representing NOAA at the fourth session, and I think that's the first time that particular item came up. So I think he is the best person to address it.

Mr. STUDDS. Mr. Johnson, you are welcome to respond, notwithstanding the fact that Mr. Tauzin's time has expired twice.

Mr. DOUGLAS. This is Mr. Jay Johnson of NOAA general counsel's office, who is the chief counsel for the Fisheries Service.

Mr. JOHNSON. Mr. Tauzin, I think there were a couple of things that were unfortunate about the final stage of the negotiation. One was that Mr. Douglas could not be there. The other was that Mr. Mialjevich's mother died the last night of the negotiation and he was unable to be there on the final day.

There was, during the final stage of the mediation, a great deal of concern about coverage in internal waters. The data that had been presented was that the habitat of the sea turtle extended into internal waters and that those States that had internal waters fisheries were undoubtedly catching turtles.

Our data was confined largely to offshore waters because that is where our observation cruises had been conducted. Nevertheless, there was some evidence that sea turtles were found in internal waters in Texas and in Louisiana, primarily. As Mr. Douglas indicated, we did not have sufficient information on anything that was happening in Louisiana—not in Louisiana—in North Carolina to be able to address that issue during the formal process that we had undertaken.

Mr. TAUZIN. Well, let me interrupt just for a second. Wouldn't it be reasonable, just in being fair to the different States involved here and the people involved in this whole problem, to treat them equally? Wouldn't it be fair to postpone TED regulations and in-shore Louisiana until you get the data, just as you've postponed it in North Carolina until you get the data?

Mr. JOHNSON. Well, Mr. Congressman, that certainly may be something that we do. I wish to address, though, the fact that there are some other things that are operating when you get into negotiating.

Mr. TAUZIN. But you haven't answered the basic question. You say you might—

Mr. JOHNSON. I can't answer that question.

Mr. TAUZIN. Is it unreasonable to ask that you treat these two regions of the country equally when you say that they are subject to the same comparable information?

Mr. JOHNSON. We are obviously going to be considering that during the comment period and before we address our final regulations. Let me explain that one of the issues that we were also dealing with in addition to turtles was the interrelationships within the shrimp industry. There was evidence that turtles were found in Texas both offshore and inshore. There was obviously a concern on the part of the Texas offshore shrimp fishermen that if they had to use TED's to save turtles, that their competitors in the inshore fisheries also ought to use TED's to save turtles.

There was another factor, and I am sure you are aware of the long—

Mr. TAUZIN. Let me stop you just a second.

Mr. JOHNSON. If you would let me finish, because there is a Texas-Louisiana connection as well.

Mr. TAUZIN. But there is a North Carolina inshore and offshore fisheries as well. You have made a distinction there, haven't you?

Mr. JOHNSON. We have because we had information about the North Carolina offshore fishery being essentially the same as the South Carolina offshore fishery. We couldn't make a comparison between the South Carolina inshore fishery and a North Carolina inshore fishery because there is no South Carolina inshore fishery and no Georgia inshore fishery.

Let me get back to the point I was making. The point is this: There was a concern expressed by some people from Louisiana that if Louisiana inshore fisheries were not required to use TED's and Texas inshore fisheries were required to use TED's, that there would be an increase in effort; you would have Texas boats coming to Louisiana in order to avoid using the TED, and there was a sense on the part of the people who had participated in the negotiation that you would get better coverage, better industry cooperation, better usage of TED's if we didn't create a situation where Louisiana appeared to be advantaged relative to Texas and the other States.

Now, on the final day of the negotiation, an offer was made by the environmental community to provide a time-limited exemption for Louisiana if Louisiana wanted it, and they conditioned their offer of that time-limited exemption on a commitment to get support for the agreement and for the regulations from Louisiana, which hasn't been forthcoming. That is the situation. Whether that situation prevails throughout the rulemaking I can't tell you because I don't know. That is how it happened.

Mr. TAUZIN. Did you have any information relative to sea—it says there are no estimates of total catch of sea turtles in inshore waters. Does that include Texas inshore waters?

Mr. JOHNSON. We have information that there were sea turtles in Texas inshore waters.

Mr. TAUZIN. You had information there were sea turtles in there. You had information there were sea turtles in North Carolina. You had information there were sea turtles in inshore waters in Louisiana. But in no cases did you have evidence of total catch

and mortality of sea turtles in those inshore waters, and yet you distinguish from one to the other.

Mr. JOHNSON. Mr. Congressman, I am telling you that part of the issue here is inter-State relationships. The relationship between Louisiana and Texas, and the inshore-offshore fisheries there are different than on the East Coast.

Mr. TAUZIN. Well, you missed my point entirely. You missed my point entirely. If you had no information relative to evidence of turtle mortality in inshore fishing in North Carolina such that you gave it an exemption from your rules until you got that data, I am asking you why Texas and Louisiana were not entitled to similar treatment in comparable circumstances. You answer me that you were concerned about the interrelationship of Texas and Louisiana. It's irrelevant. Why weren't either one of those two—both together, rather, given the same treatment North Carolina was given? If you don't have a good answer for that, then I suggest it may not be unreasonable to extend to those inshore fisheries the same treatment you extended to North Carolina.

Mr. DOUGLAS. Mr. Tauzin.

Mr. TAUZIN. Yes, sir, please.

Mr. DOUGLAS. Your line of questioning certainly was anticipated. Let me promise you that in our discussions of this as we go into a fifth meeting of the negotiating team, which the team is set up in advance—we said April, I suspect with all the data we're going to get from public hearings it may be May—but at that time we will make sure that this issue is raised with the clarity with which you are raising it, sir, and I am sure that your representatives will raise it, and I will assure you that it will be raised at the time that the decision is taken back at the Department of Commerce by either Dr. Calio or the Secretary. We will give it consideration. That is the best I can do for you at this time in answering your questions.

Included for the record of the hearing is a letter from Mr. Weber of the Center for Environmental Education responding to several questions raised by Mr. Tauzin at the hearing.

Mr. STUDDS. Let me just observe to the gentleman that asking the question a sixth time, and now that we know it was anticipated—

Mr. TAUZIN. I am not going to ask it again.

Mr. STUDDS. No, no, I am not being tough with the gentleman, but I think that one can reasonably deduce that it's unlikely it is going to be answered at this point insofar as it was anticipated in the first instance.

Mr. TAUZIN. I have that same feeling, Mr. Chairman.

Mr. DOUGLAS. We answered it to the best of our ability, Mr. Tauzin.

Mr. TAUZIN. Yes, I understand. That's the problem.

Mr. Chairman, let me first thank you for your indulgence. I know I have gone over my time.

Mr. STUDDS. No, that was not meant to be critical. It's just that the record should reflect the futility of the line.

Mr. TAUZIN. Yes. I sense that same futility.

What I would like permission to do, since we do have limited time—and I apologize for overextending—is to, for the record,

submit additional questions, particularly to the negotiating team and Mr. Douglas, that we might get written answers to.

Mr. DOUGLAS. We would be happy to, Mr. Tauzin.

Mr. TAUZIN. I thank the chairman for his indulgence.

Mr. STUDDS. I think that all members might like that opportunity.

Let me just ask does the other gentleman from Texas wish further questions?

Mr. ORTIZ. Yes, Mr. Chairman.

Mr. STUDDS. Mr. Ortiz, go ahead.

Mr. ORTIZ. I request unanimous consent that we provide questions for the rest of the panel that we might not be able to get to this afternoon.

Additional questions and answers can be found at end of hearing.

Mr. STUDDS. Now, before we end this, are there any members who absolutely feel that they must? Please, I mean that very seriously.

Mr. ORTIZ. Yes, I just have one.

Mr. STUDDS. The gentleman from Texas?

Mr. ORTIZ. We have heard about the other side of the story, and I would like to ask now, Ms. Grunert, why do you oppose mandatory TED's? If you could, give us a rundown as to why you are opposing it.

Ms. GRUNERT. Well, first of all, my first opposition to mandatory TED's is the question I brought up earlier of what is going to happen to the leatherback turtle.

Second of all, we feel we are discovering additional problems with TED's in relation to turtle mortality. Have any of you gentlemen ever heard of the term "chumming effect"? This is when the by-catch is thrown over the board and the fish are eating it. We did have one incident with Pat Henry with the Georgia TED where he noted a chumming effect from the by-catch coming out of the TED. We think this may present an additional hazard to the turtle since he will be part of the by-catch coming out also, and the sharks are there waiting.

We also believe that there is a possibility—and I know this may be new to some—but we believe that possibly the Kemp's ridley does give out a distress signal, thereby allowing the shark to home in, when he is excluded from the TED.

We also had an incident with Mike Elrod, who had been testing standard nets and NMFS TED's. In the 30 years that he has been fishing, he caught a total of five turtles. The first four were all excluded alive, and those four had all been caught in standard trawls. The last turtle he caught was caught in a TED, and it was dead. It was a Kemp's ridley headstart turtle that had been released off of Port Isabel.

The shrimp industry also continues to question the extent of shrimp loss, supplemental income loss from by-catch reduction, and onboard safety-related problems, for an industry already laden with the high cost of insurance. We still have not received an answer to our question about product liability, if that will be available.

Many of the TED's that are currently available—because of the incident with Mr. Mike Elrod with the turtle that got killed in the

TED, that was in relationship to the bunge cord, and that supposedly had been corrected since. However, he has seen additional TED's on display which still have the bunge cord, and we would like to recommend that all TED's that are currently in warehouses be pulled and checked for proper construction. This is a problem that exists in prebuilt TED's.

There are also many additional problems with clogging, not only with plastics but tires, many other manmade objects. We also have problems with clogging from natural objects such as cigarfish and ribbing fish. They get in the top lid of the TED and hang there. They look like a Christmas tree that has been decorated. They're bright and shiny; they attract all the sharks.

We've had additional problems of wear and tear on the TED as a result of this, but the main thing that happens with the ribbing fish when they get caught in this top panel is it makes the door a solid mass, thereby when the water pressure hits it, the door stays open and everything goes out of the TED.

I guess that is the main points I have to say about that on the problems with the TED, and we are concerned about the effects that it may have on the turtles.

Mr. ORTIZ. Thank you very much.

If I may, Mr. Chairman, we have another gentleman from my district, Mr. Julius Collins, who is a fisherman, a gentleman that goes out at sea, and maybe he would be able to join and tell us about his experiences with TED's and his concerns. Mr. Collins, if you will, please.

Mr. STUDDS. Mr. Collins, if you will identify yourself for the record and be brief in your comments, you are welcome.

Mr. COLLINS. Yes. Thank you, Mr. Chairman. My name is Julius Collins and I reside in Brownsville, TX. I also own shrimp boats, and I must say I have been shrimping since I was 14 years old. My father was a shrimper before I was, and my grandfather. I was born and raised in Billy Tauzin's district.

So I recently wanted to use those TED's, and finally at the National Marine Fisheries Service threatened to put these regulations on, I got a couple of TED's from the National Marine Fisheries. I also had a couple of TED's from Georgia. I proceeded to put the two National Marine Fisheries' TED's and let my boy take the boat out with three National Marine Fisheries—one National Marine Fisheries gentleman and one from Texas A&M Extension, or two from there.

They proceeded to go out, and I believe Margie went with them.

Ms. GRUNERT. Yes.

Mr. COLLINS. They proceeded to fish one night in very calm conditions, and they set it up. My son gave me the report when they came in. He said that, first, if you use four TED's—we've got quad rigs on our boat—you probably need an extra man if you use the National Marine Fisheries TED because they are very clumsy and hard to handle.

The danger is not when they are out fishing in the water. It's just when you bring them in. When you bring in your rigs, those things hang out just like the chandelier over your head, and as the boat rolls in adverse conditions, he says he feels that it is potential-

ly very dangerous to hurt somebody on the boat, which I could see myself.

They tested those nets and made four or five drags. The first couple of drags it caught less shrimp than the regular side without the TED's. Then they adjusted the TED's and finally they adjusted too much because it tore the net up. So they had to put nets back onboard, change nets, put the TED's back on, and set it back overboard, in which the last drag they finally got it to where they caught about the same amount of shrimp.

So out of four or five drags, two there was less, one tore up net, and one was basically the same.

So I proceeded to leave the TED's on the boat and sent the captain, the regular captain, out. He fished two nights and came back in. He said, "Boss man," he says, "if I have to use those National Marine Fisheries' TED's, they are too dangerous, I would rather stop fishing." So I said, "All right, we'll try the Georgia one." So the Georgia one, we put them on, and they did lose a little bit of shrimp as it started out, but then I modified them to where they went out with the Georgia TED's and they fished for three or four days, where the loss of shrimp wasn't that much with my modification.

But they were not accepted with my modification. I guess you would have to test them again.

The opening is about the same size. What I had done, I sewed some webbing on the flap and sewed along the bag where that little flap doesn't go back and forth where you lose too much shrimp. So I believe, with modification you could make it work to where you wouldn't lose that much shrimp. But regardless of whatever TED you use on a shrimp boat, I guarantee, if anything comes there—a tire, a log, plastic, anything—that will stop the flow through those screens that everything will go out. You'll lose some shrimp regardless, even if it's. I believe that in a couple of years' time, they will have one—I am developing in my mind there—I could go and make it, put it on the shrimp boats, and try them out and maybe experiment with them, see if it loses shrimp or not. If not, then we could send them to where they test those TED's at Cape Canaveral, and if it's acceptable, they might be the solution. It's made all of webbing, and it will take some time before we finally get it going, though.

You had a question, Mr. Tauzin?

Mr. TAUZIN. No.

Mr. COLLINS. Since then I have been trying to see what was going to happen for these regulations. I did attend part of the meetings. In fact, I attended two, one in New Orleans and one in Georgia. I believe it was, and the last one—I missed the one in Washington—the last one was in Houston. I believe that was the best way to go, but I was real frustrated during the meetings. And I will tell you why. At first, the negotiators wanted to keep it in special session without nobody there, and I was sent out as an adviser to our spokesman, not that I know too much, but I have had years of experience on a shrimp boat and maybe they'd have questions that he could not have answered that I could have answered.

But as we got along, I found out in Georgia that more and more the negotiators were taking the meeting away from the audience

and bringing it to special session or executive sessions. And by the time they got to Houston, they held it exclusive in executive session, and I felt left out. I didn't know what was going on. The people on the shrimp committee was asked not to discuss anything that went on in the negotiations.

Finally, I got my guy, got him by the throat and asked him what was going on, around noon that day. He said, "I can't tell you." But finally he told me, "Well," he says, "I believe we'll go with the 10-fathom limit," he says, "I believe that's what we'll go along with."

I said, "OK." Then I started thinking about that and said, "Well, I'm going to go home and you guys work it out."

So when I got the regulations, I found out, yes, 10 fathoms—10 miles was Phase I but he didn't tell me there was Phase II and Phase III. Phase II is 15 miles and all of Louisiana. And Phase III, that's the one that bothers me the most, is that if Mexico does not get their act together, then we will put more restrictions on the poor shrimpers. And I can't go by that.

I wish it would have been the negotiations would have been open where everybody could have seen it or listen to it, and I wish Dr. Calio would not have rushed it in the amount of time that you people said you were going to sue him and he didn't want to get sued, so I guess he wanted to put that in the smallest amount of time as possible.

These things should have dragged on a little more time where people could have gotten a little bit more data, and a lot of those fingerpointing at the shrimpers or the industry about the strandings—which they have all over the Gulf and they say it's all the shrimpers, but some belong to other people like the oil companies or maybe the plastics people—all this might have been ironed out. And if everybody would have worked together and slowly gone through it, we might have had something that everybody could have accepted right off the bat.

Mr. STUDDS. Thank you, Mr. Collins.

This hearing, as all hearings, ought to end with real fishermen, I think. It is always so much more cogent. It is probably a good thing you left Mr. Tauzin's district because as I understand it, everybody else is coming into it. He has problems with overpopulation on this issue.

Mr. TAUZIN. Well, they just came in temporarily.

Mr. STUDDS. Oh, just temporarily.

Mr. TAUZIN. They're leaving for other places looking for work.

Mr. STUDDS. Mr. Weber.

Mr. WEBER. Mr. Chairman, may I have a few brief moments to respond?

Mr. STUDDS. Not that many, because we may add to the endangered species here if this continues. [Laughter.] You may have 1½ minutes.

Mr. WEBER. I just wanted to respond to Mr. Tauzin's line of questions first of all.

Mr. STUDDS. Only if you don't provoke a counterresponse.

Mr. WEBER. I hope I answer his question. If you look in Exhibits K and L of my testimony, you will see a considerable amount of information on inshore captures of sea turtles in Louisiana. That is part of the information that we based our agreement on.

Secondly, our agreement on the Louisiana variable was meant to address a problem that Mr. Mialjevich raised at the eleventh hour when he indicated to us that he would not be able to sign the agreement. He then left the negotiations for personal reasons. We tried to come up with a means of responding to his concerns, and that was the spirit in which we developed the Louisiana variable.

Mr. STUDDS. Thank you.

Mr. TAUZIN. Mr. Chairman.

Mr. STUDDS. Yes?

Mr. TAUZIN. I don't want to make a response, but there is something I would like to add for the record, however, if you don't mind.

Mr. STUDDS. Please.

Mr. TAUZIN. We did call mineral management this morning to get some information on the question of explosives being used in rig demolition to see if there was an evidence of correlation. And there is substantial evidence. From 1980 to 1985 there were 14 strandings reported on Louisiana beaches. In 1986 there were 92. And that is being used as an indication for the need for this regulation.

But the rig demolition explosive information indicates a 61 percent increase in rig demolition using explosives in that same period from 1984 to 1986 over the 1981-to-1983 period, indicating a large increase in explosives used when the larger strandings were recovered.

We might also want to point, Mr. Chairman, as we conclude, to the findings of the negotiating team that say, "Recent stranding data and onsite observations establish a convincing correlation between rig removals by explosives and sea turtle mortality," followed by the statement that, "As a result, some mortalities due to rig removals may be incorrectly attributed to shrimp fishing."

The point being that while all of us want to protect the endangered species, that perhaps we are leveling our regulation at the wrong culprit here and we need to really consider, as our friend Mr. Collins pointed out, that there are other ways and other persons involved in this problem that we ought to be considering when we draft regulations.

Thank you, Mr. Chairman.

Mr. STUDDS. I want to thank the gentlemen from Texas and Louisiana, and also the patient members of this panel. It has been a long afternoon.

I must say that I had no idea how complex a problem we faced. I thought concepts like the Louisiana variable belonged in murder mysteries. This is really a remarkable thing. The plot thickens the more you learn about this. Obviously, it is a serious problem and, obviously, the wisdom has not yet been found to deal with it to the satisfaction of everyone and, obviously, it must be dealt with. So we will do our best to be a cooperative and constructive partner in the effort to resolve that.

I regret to announce that the effort to come up with an appropriate alternative acronym has both run out of time and yielded only candidates whose inclusion in the public record are open to serious question. [Laughter.] So we will have to defer that until the next time around.

I thank you all very much for your patience.

The subcommittee stands adjourned.

[Whereupon, at 3:47 p.m., the subcommittee was adjourned.]

[The following was submitted for the record:]

100TH CONGRESS
1ST SESSION

H. R. 1467

To authorize appropriations to carry out the Endangered Species Act of 1973 during fiscal years 1988, 1989, 1990, 1991, and 1992.

IN THE HOUSE OF REPRESENTATIVES

MARCH 5, 1987

Mr. STUDDS (for himself, Mr. JONES of North Carolina, Mr. DAVIS of Michigan, and Mr. YOUNG of Alaska) introduced the following bill; which was referred to the Committee on Merchant Marine and Fisheries

A BILL

To authorize appropriations to carry out the Endangered Species Act of 1973 during fiscal years 1988, 1989, 1990, 1991, and 1992.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That section 15 of the Endangered Species Act of 1973
4 (16 U.S.C. 1542) is amended to read as follows—

5 “AUTHORIZATION OF APPROPRIATIONS

6 “SEC. 15. (a) IN GENERAL.—Except as provided in
7 subsections (b), (c), and (d), there are authorized to be
8 appropriated—

1 “(1) not to exceed \$35,000,000 for fiscal year
2 1988, \$36,500,000 for fiscal year 1989, \$38,000,000
3 for fiscal year 1990, \$39,500,000 for fiscal year 1991,
4 and \$41,500,000 for fiscal year 1992 to enable the
5 Department of the Interior to carry out such functions
6 and responsibilities as it may have been given under
7 this Act;

8 “(2) not to exceed \$5,750,000 for fiscal year
9 1988, \$6,750,000 for each of fiscal years 1989 and
10 1990, and \$6,750,000 for each of fiscal years 1991
11 and 1992 to enable the Department of Commerce to
12 carry out such functions and responsibilities as it may
13 have been given under this Act; and

14 “(3) not to exceed \$2,200,000 for fiscal year
15 1988, \$2,400,000 for each of fiscal years 1989 and
16 1990, and \$2,600,000 for each of fiscal years 1991
17 and 1992 to enable the Department of Agriculture to
18 carry out its functions and responsibilities with respect
19 to the enforcement of this Act and the Convention
20 which pertain to the importation or exportation of
21 plants.

22 “(b) COOPERATION WITH STATES.—For the purposes
23 of section 6, there are authorized to be appropriated not to
24 exceed \$12,000,000 for fiscal year 1988, \$13,000,000 for

3

1 each of fiscal years 1989 and 1990, and \$14,000,000 for
2 each of fiscal years 1991 and 1992.

3 “(c) EXEMPTIONS FROM ACT.—There are authorized
4 to be appropriated to the Secretary to assist him and the
5 Endangered Species Committee in carrying out their func-
6 tions under section 7 (e), (g), and (h) not to exceed \$600,000
7 for each of fiscal years 1988, 1989, 1990, 1991, and 1992.

8 “(d) CONVENTION IMPLEMENTATION.—There are au-
9 thorized to be appropriated to the Department of the Interior
10 for purposes of carrying out section 8A(e) not to exceed
11 \$400,000 for each of fiscal years 1988, 1989, and 1990, and
12 \$500,000 for each of fiscal years 1991 and 1992, and such
13 sums shall remain available until expended.”.



STATEMENT OF FRANK DUNKLE, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE,
DEPARTMENT OF THE INTERIOR, BEFORE THE SUBCOMMITTEE ON FISHERIES AND
WILDLIFE CONSERVATION AND THE ENVIRONMENT, COMMITTEE ON MERCHANT MARINE
AND FISHERIES, U.S. HOUSE OF REPRESENTATIVES, CONCERNING H.R. 1467 AND
THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT.

MARCH 17, 1987

.....
Mr. Chairman, I appreciate the opportunity to appear here today to discuss
the reauthorization of the Endangered Species Act of 1973, as amended.

As you know, the Act is probably the most far-reaching law ever enacted
by any country to prevent the extinction of imperiled animals and plants.
Conserving these biological resources is a complex job involving not only
the Federal Government, but the States, the scientific community,
conservation organizations, industry, and concerned individuals as well.
Since 1973, the Congress has enacted a number of amendments designed to
make the Act more effective and, at the same time, to increase its
flexibility for responding to potential problems. These changes, along
with internal administrative improvements in the Federal departments
responsible for implementing the Act, have resulted in a program that is
running efficiently and cooperatively.

However, for various reasons, the Act was not reauthorized when authority for appropriations expired at the end of Fiscal Year 1985. The program has been proceeding on appropriations provided in the absence of an authorization for the last two fiscal years. This has naturally created a certain amount of uncertainty within the program, and I commend the Subcommittee for moving so rapidly to commence the reauthorization process this year.

H.R. 1467 has been introduced by the Chairmen and Ranking Minority Members of the Full Committee and this Subcommittee to reauthorize appropriations for the program for five years. The bill provides authorizations substantially in excess of those proposed by the President's budget. Unfortunately, the Endangered Species program is not the only program, nor FWS the only agency, with a claim on the Treasury. We strongly recommend that the bill be amended to conform with our budgetary recommendations, as set forth in the Administration's reauthorization proposal, which either has just been transmitted to the Congress, or will be shortly.

The differences between the Administration's proposal and H.R. 1467 are as follows:

Section 15(a)(1) of the Act would be reauthorized at \$23,670,000 for fiscal year 1988, and such sums as may be necessary for succeeding years, rather than the \$35,000,000 for fiscal year 1988 (rising to \$41,500,000 for fiscal year 1992) provided in H.R. 1467;

Section 15(b) would not be reauthorized at this time, in contrast to the \$12,000,000 for fiscal year 1988 (rising to \$14,000,000 for fiscal years 1991 and 1992) provided in H.R. 1467;

Section 15(c) would be reauthorized for such sums as may be necessary rather than the \$600,000 provided for each of the next five fiscal years in H.R. 1467; and

Section 15(d) would be reauthorized at \$390,000 for fiscal year 1988 and for such sums as may be necessary for succeeding years, rather than the \$400,000 for fiscal year 1988 (rising to \$500,000 for fiscal years 1991 and 1992) provided in H.R. 1467.

We defer to the Departments of Agriculture and Commerce for a discussion of the authorization amounts included in the Administration's proposal for their programs under the Act.

Finally, we note that H.R. 1467 provides reauthorization for a five-year period. Although we have no policy objections per se to that length of time, we do note that not all of the various controversies which prevented reauthorization in the last Congress have been resolved. Under the circumstances, we would suggest that the Subcommittee consider a reauthorization for four years instead, so that the length of the reauthorization does not itself become an obstacle to passage. We reemphasize, however, that we have no objection to a five-year extension if such could be enacted.

A review of our efforts over the past several years may have a bearing on the Committee's consideration of the reauthorization of the Endangered Species Act.

Listing Accomplishments

Since 1982, when the Act was last reauthorized with changes intended to expedite the listing of plants and animals that qualify for protection, over 150 species have been added to the endangered and threatened lists. During 1986 alone, 37 species were listed, including such diverse creatures as the Mauna Kea silversword, the northern aplomado falcon, and the Nashville crayfish. The lists now include 926 U.S. and foreign species.

Despite considerable progress in recent years, however, over 3,000 U.S. species remain candidates for listing under the Act. In order to gather information on these species, the Service has published a series of notices of review that synopsise its assessment of candidate species and former candidates. A revised notice for animals is now in the early stages of preparation, and revision of the notice for plant species is planned for later this year. Although the Act does not afford legal protection for candidate species, Federal agencies, State agencies, and private organizations concerned with species conservation and maintenance of biological diversity use these notices to identify and avoid potential problems and to focus conservation efforts on the most appropriate areas.

Recovery Accomplishments

Restoring endangered and threatened species to the point that they are again secure members of their ecosystems, and thereby no longer in need of special Federal protection, is a most critical element of the Endangered Species Program. Listing a species is of limited value if steps are not taken toward recovery. Our increased emphasis on recovery is reflected in the 167 new recovery plans that have been approved since 1982, over three-fourths of the total of 211 that have been approved since passage of the Act.

This past year the Service took an unprecedented step in species recovery efforts involving the red wolf. In the mid 1970's, the red wolf was on the verge of extinction. Threats to its remaining wild population were so great that the Service decided to locate and capture as many red wolves as possible and to preserve the species in captivity. This capture was successful, and up to this year, the red wolf existed only as a captive breeding population of less than 75 animals. Currently, however, with the assistance of the Point Defiance Zoo of Tacoma, Washington; the State of North Carolina; and by utilizing the experimental population designation provided in the 1982 amendments; the Service is prepared to reintroduce this species back into the wild for the first time since 1975.

Presently there are four pairs of red wolves in acclimation pens at the Alligator River National Wildlife Refuge in North Carolina; they are scheduled for release in April of this year. With this release, the Service will have reestablished in its native habitat an endangered species that is now extinct in the wild.

The Service has also put a considerable effort into the recovery of the Southern sea otter. Sea otters were listed as threatened in California in 1977 due to threats of oil spills in the nearshore marine environment. One of the major recovery activities that has been identified is the need to establish a second population of Southern sea otters far enough removed from the parent population that a large single spill is unlikely to decimate both populations. Because the sea otter is also protected under the Marine Mammal Protection Act, difficulties arose in developing a translocation proposal that would be practical and yet satisfy the requirements of both Acts. Legislation developed in this Subcommittee was passed last year that resolved the technicalities and the Service is now preparing to make a decision on translocation. This is a complex and controversial proposal. As such, the Service has provided for an extraordinary amount of public involvement and has taken great pains to ensure that public comments have been given full and serious consideration. The final environmental impact statement is almost completed and the final rulemaking (and decision-making) will be completed in the next several months. Should a decision in favor of translocation be made, the Service hopes to commence the actual movement of otters in August 1987.

This, however, is a highly ambitious schedule that may be delayed because of factors beyond the Service's control.

A revised Northern Rocky Mountain Wolf Recovery Plan is now nearing final approval following more than 3 years of exhaustive review. During this review process the Service has sought to address the concerns of all interested parties while meeting our mandate to recover this endangered species.

Of particular concern is the potential for wolves to prey on domestic livestock and to create conflicts with existing uses of public lands. The Service believes it has the authority to control individual wolves preying on livestock; concerns remain as to whether livestock operators may do so, an item of strong local concern. The Service believes that there will be few, if any, conflicts over land use practices due the extensive wilderness and National Park lands in the recovery areas, and the existing management guidelines for grizzly bears on those lands. Our experience in Minnesota and elsewhere shows that wolves are not particularly sensitive to human intrusion, except at birthing and pup-rearing locations. These areas are extremely limited in both space and duration, and should not cause any conflicts with existing land use patterns. Similarly, because of high birth rates, there will not be the degree of concern over individual wolves that exists for grizzly bears.

As described above, the complex and often difficult task of recovering endangered species is one that is too large for any single agency. A

coordinated recovery program involving Federal, State, and local interests is usually necessary. Such an approach was initiated when the Interagency Grizzly Bear Committee (IGBC) was established. The IGBC is composed of top-level managers from the Fish and Wildlife Service, the National Park Service, the Forest Service, the Bureau of Land Management, and the States of Wyoming, Montana, Idaho, and Washington. It coordinates research, management, law enforcement, and funding for conservation of the threatened grizzly bear in the conterminous 48 States. Recovering this large omnivore in the face of continuing threats cannot be accomplished quickly or easily. In the meantime, close interagency cooperation is being emphasized in a variety of other recovery programs. The agency which manages Federal lands that encompass and surround designated recovery areas must play a key role in any recovery initiatives.

The "experimental population" approach, authorized by the 1982 amendments as a tool for recovery of listed species, is beginning to show results. General regulations implementing the concept were published on August 27, 1984. Special regulations to establish the first experimental population of an endangered species were approved September 13, 1984. Within days, seven Delmarva fox squirrels were captured near Blackwater National Wildlife Refuge in Maryland and released into the Assawoman Wildlife Area, land managed by the State of Delaware. The Fish and Wildlife Service worked in close cooperation with Delaware and Maryland wildlife officials, and has high hopes that this joint venture will hasten the day when the Delmarva fox squirrel is recovered and can safely be delisted. Since this fox squirrel reintroduction, three additional experimental populations have

been identified. Colorado River squawfish and woundfin have been released into the Gila River drainage of Arizona, and as described previously, red wolves are currently on site at the Alligator River National Wildlife Refuge North Carolina, pending an April release. Two other experimental populations are currently in the regulatory development stage, the Southern sea otter for release on the Southern California coast and the yellowfin madtom for release in southeastern Virginia. The success of the experimental population approach to date has been possible due to the cooperative efforts of the Service and the various State conservation agencies. The Service plans to continue using the experimental designation when appropriate to augment its endangered species recovery program.

Interagency Cooperation

Section 7 of the Act, which contains the interagency cooperation process for actions having Federal agency involvement, was substantially amended in 1982. A set of comprehensive regulations that implement these changes, along with modifications required by the 1978 and 1979 amendments to the Act, were proposed on June 29, 1983. There was widespread interest in the proposed regulatory changes and a large number of comments were received. The final rule was published June 3, 1986. The Service believes the final regulations will be effective in minimizing the potential for conflict arising from proposed Federal agency action.

As the number of listed species and Federal actions that may affect them increase each year, so do the numbers of Section 7 consultations. The consultation process involves an exchange of information among the Service, the Federal agency, and any permit or license applicant. It is often possible to resolve potential problems to obviate the need for a formal consultation, particularly at an early stage in the planning process. This is illustrated by the fact that there were over six times more informal consultations in 1986 than occurred in 1979, while the total number of formal consultations decreased 70 percent from 1979 through 1983. The number of formal consultations began to increase in 1984, probably as a result of the increase in the number of listed species and an increased awareness of the Section 7 process. During FY 1986, the Fish and Wildlife Service participated in 10,925 consultations, all but 421 of them informal. Of the 421 formal consultations, 369 resulted in "no jeopardy" biological opinions, and "reasonable and prudent alternatives" for avoiding jeopardy were provided for almost all others.

When formal consultation does take place, it is the Service's goal to both protect the listed species and their habitats and to find a way for the project to proceed. Numerous management approaches are used by the Service to achieve this goal. One of particular interest is being used to protect listed fishes found in the upper basin of the Colorado River system. This approach involves the active participation of Federal and State agencies and project applicants. Working with applicants for projects that are likely to jeopardize the listed fishes, a joint program can be launched

to conserve and manage the water and fish resources. This approach is now being taken in a number of consultations on western water projects.

A recent consultation involving the Concho water snake was one in the Service was able to utilize state-of-the-art instream flow methodology and other techniques to avoid a dilemma. The Stacy Dam and Reservoir is proposed to be constructed within Concho water snake habitat in Texas, and the Service's initial determination was that no reasonable and prudent alternative would permit construction of the project at its proposed site. Questions of water rights and State law prevented construction elsewhere. Legislation was introduced in both Houses of Congress to permit construction, notwithstanding the Endangered Species Act. A considerable controversy, perhaps approaching that of the Tellico Dam and the snail darter, seemed likely.

Immediately after my confirmation in December I examined this situation. From my experience with endangered species and western water issues, I felt there was an opportunity to apply current instream flow technology and explore the development of reasonable and prudent alternatives not considered during the initial consultation. The resources of the Service were mobilized nationwide, and extensive additional work was done by biologists and other specialists not involved in our initial consideration of the project.

The final biological opinion offered a number of reasonable and prudent alternatives which, if carried out with the Stacy project, would avoid

jeopardy to the water snake. The approaches involve rehabilitation of existing snake habitat, restoration of former habitat where the species is no longer found, and maintenance of acceptable stream flows. Additionally, research and monitoring on water snake populations would occur for up to 10 years after construction of the dam.

Although the project sponsor is very concerned over the costs involved, it is our understanding that the Service's recommendations will be accepted as a condition for issuance of the necessary Federal permits. The Service's role in this consultation was not to stop the project but to give scientific advice and provide alternatives that would avoid jeopardizing the water snake. For some project (less than 1 percent), it is not possible to develop any such alternatives, and where this is the case we do not hesitate to say so. However, for this project, by utilizing resources and expertise not originally brought to bear, the Service was able to offer a means of resolving the problem that provides for the survival of the snake and the human need for additional water resources. Our ability to do this, within the provisions of the Endangered Species Act, is essential to avoiding destruction conflicts between human and wildlife needs. This is clearly in the interests of both.

I am submitting for the record a copy of our December 19, 1986, biological opinion on the Stacy Dam and Reservoir.

To address further long-term means by which potential conflicts may be resolved in the Colorado system, the Service has established the Colorado

River Coordinating Committee. This group consists of representatives of the States of Wyoming, Colorado, and Utah, the Bureau of Reclamation, the Fish and Wildlife Service, and water development and conservation groups. The Committee is seeking various approaches that will enable project development to comply with the Endangered Species Act while both maintaining interstate compact agreements and other water rights under State law.

During FY 1986, the Fish and Wildlife Service participated in 10,925 consultations, all but 421 of them informal. Of the 421 formal consultations, 369 resulted in "no jeopardy" biological opinions, and "reasonable and prudent alternatives" for avoiding jeopardy were provided for the great majority of others.

Another change mandated by the 1982 amendments to the Endangered Species Act was a significant streamlining of the Section 7 exemption process, by which a cabinet-level committee may grant an exemption from a Secretarial determination under Section 7 that an agency action will violate Section 7(a)(2) of the Act. Regulations implementing these procedural changes were published on February 28, 1985.

For those actions or projects that do involve Federal agencies, protection for listed species and their habitats can sometimes be gained through a habitat conservation plan and the granting of a Section 10 permit. The 1982 amendments added a provision to Section 10 allowing the issuance of a permit for taking of an endangered species if such taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity.

Prior to the 1982 amendments, a permit to take an endangered species could be issued only for scientific purposes or to enhance the propagation or survival of the species.

In order to obtain such a permit, the applicant must submit a habitat conservation plan that promotes the long-term conservation of the species in the wild. The plan must include steps that will be taken to minimize and mitigate the impacts the action will likely have on listed species and their habitats, along with assurances that adequate funding for the plan will be provided. Such plans have been written to conserve the unique flora and fauna of San Bruno Mountain in California and the Coachella Valley fringe-toed lizard in southern California's Mojave Desert. Also, a conservation plan for the development of a small tract on Key Largo, Florida has resulted in the issuance of an incidental take permit. Other plans are actively being worked on or considered, including an extensive plan on North Key Largo, and a plan in southern California designed to provide for the endangered least Bell's viero.

INTERNATIONAL CONSERVATION EFFORTS

Since wildlife does not respect national boundaries, the maintenance of biological diversity is a matter of international concern. The Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, usually referred to as the Western Hemisphere Convention, seeks to conserve our region's native flora and fauna, including migratory birds, in the

face of widespread habitat loss and environmental degradation. Nearly all of the countries in our hemisphere now are signatories to the Convention. We have initiated a number of important projects to further the purpose of the Western Hemisphere Convention, with an emphasis on the training of local managers. For example, 150 Latin American biologists from 20 countries have been able to attend U.S.-sponsored workshops on management of refuges, migratory birds, crocodilians, management planning, environmental education, and research techniques. The heads of most Latin American wildlife agencies have participated in these workshops. Perhaps our most important accomplishment has been the establishment of Latin America's first graduate level training program in wildlife management. This university program is located in Costa Rica and will serve the Central America region. This is its first year of operation. There are 12 students from 9 countries. World Wildlife Fund-U.S. and the Government of Costa Rica are cooperators in this much needed activity. In the future we hope to replicate this program in Spanish speaking South America and in Brazil. In terms of cost effectiveness, the education of 12 students in Costa Rica is cheaper than that for 3 students in the U.S. with no significant loss in quality.

In addition to our activities in the Western Hemisphere, the Fish and Wildlife Service has taken advantage of the foreign currency authority in section 8 to implement a number of wildlife and habitat management, research, and training activities of benefit to threatened and endangered species in India, Egypt, and Pakistan. As these countries elevate their priorities for the maintenance of their living resources, we have been

able to provide extensive assistance and support without an expenditure of U.S. dollars. We assisted with initial planning for establishment of the first protected area in Egypt. Feedback and support from our Embassy on this project has been outstanding. Although we have employed in excess of \$4 million in foreign currencies over the history of this activity, it has not been a burden upon the Service because we work through private groups, foundations, universities, and research institutions to carry out our objectives.

Using foreign currencies, we have embarked on a major project in India. The Government of India has, as a very high priority, established a Wildlife Institute where all wildlife managers and researchers will be trained. The Service is working with the Institute in curriculum development, faculty training and development, and with a visiting professor and guest lecturer activity. This is an opportunity to greatly influence, without U.S. dollar costs, resource conservation in India while that country is still rich in diversity, numerous U.S. universities and private institutions are helping us in this effort.

During the last year the United States became a party to the Convention on Wetlands of International Importance. That action was taken at the request of the Service. The Convention seeks to steer the progressive loss of wetlands globally and to work for the wise use of wetlands. The importance of wetlands, for their wide array of values and particularly as habitats for largest diversity of migratory birds in our Western Hemisphere have made us anxious to share our wetlands conservation knowledge

with others. This is an important complement to our many domestic wetland activities.

Also during the last year, we signed a cooperative agreement with the Peoples Republic of China in the field of nature conservation. This agreement will allow the Service, other resource management agencies and members of the private conservation community to carry out cooperative work in the research and recovery of threatened and endangered species, migratory bird management and research, marine mammal research and protected area conservation.

LAW ENFORCEMENT

The Service has continued to emphasize an aggressive law enforcement effort in protecting species listed under the Endangered Species Act as endangered and threatened and listed on the appendices to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). During 1986, the Service opened more than 3,000 cases under the Endangered Species Act, which implements CITES in the United States. These resulted in total criminal fines of \$57,875 and 2,678 days in jail being imposed. Of these figures, \$6,000 in fines and 1,095 days in jail were suspended. In addition, \$33,275 in civil penalties was imposed. The following are summaries of some of the more significant enforcement actions under the Endangered Species Act in 1986.

In 1986, the Service received intelligence that one or more shipments of endangered thick-billed parrots had been smuggled into the United States. Subsequently, Special Agents in several parts of the country began receiving complaints that these parrots were being offered for sale. As a result of the Service's investigation, an Oregon resident was found guilty of the interstate sale of five thick-billed parrots, sentenced to a \$5,000 fine, and placed on five years' probation. In Los Angeles, California, a husband and wife were sentenced to a total of \$11,000 in fines and placed on three years' probation for attempting to sell six thick-billed parrots valued at \$12,000 to Service Special Agents. Related cases are pending in other parts of the country, including one seizure that occurred in the Washington, D.C. area.

In Virginia, Service Special Agents investigated the deaths of five bald eagles. This investigation determined that all died as a result of poisoning from Carbofuran, a pesticide commonly used to protect corn and peanuts. The Environmental Protection Agency and various State agencies are now studying the potential hazards of Carbofuran, and the Fish and Wildlife Service has completed an endangered species consultation regarding species threatened by this chemical.

A total of 4,570 Geoffrey cat skins was seized in New York as part of an international investigation involving stolen Bolivian CITES permits. These furs had been illegally exported from Argentina to Paraguay and then to Bolivia, where the fraudulent documents were obtained. The furs were shipped from Bolivia to Israel and finally to the United States, where

seizure was made.

Following a two-year undercover investigation into the smuggling and the subsequent illegal sale of parrots in the United States, Service Special Agents arrested 23 defendants and seized 180 live birds on June 24, 1986, in Texas and New Mexico. Seven other defendants, including three major suppliers in Mexico, remain at large as fugitives. Agents documented illegal transactions involving more than 500 birds, valued on the retail market at almost a quarter of a million dollars and consisting mostly of CITES Appendix II species, although endangered thick-billed parrots and Appendix I scarlet macaws were also represented. To date 17 of the 30 people indicted have pleaded guilty to violating the Lacey Act, and fines assessed total \$41,000. The Service's first covert investigation into cactus-smuggling for the commercial market has resulted in the forfeiture of more than 200 live plants and fines totalling \$12,000 for six people who pleaded guilty to conspiracy and the illegal importation of "living rocks" cacti, listed on Appendix I of CITES and protected by the Endangered Species Act. Valued by hobbyists and traded internationally, the plants are considered among the 10 most endangered in the world and are found in the wild only in remote canyons of Mexico. The forfeited cacti include many unique specimens and have been donated to the University of California and other institutions including botanical gardens on the West Coast. Two vehicles used to smuggle the plants have also been forfeited to the Government.

In Los Angeles, a major importer of parrots was sentenced to 60 days in jail, a \$4,000 fine, and 300 hours of community service for violations of the Endangered Species Act and the felony provisions of the Lacey Act involving illegal trafficking in parrots. Seventy-eight parrots valued at \$80,000 were seized.

Mr. Chairman, this concludes my statement. I would be pleased to answer any questions you or any of the other Committee members might have. I would also like to add at this time that we appreciate your continuing support for the Endangered Species Program, and we stand ready to assist in any way we can during the entire reauthorization process.



United States Department of the Interior

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In Reply Refer To:
Region 2: SE

JUL 19 1986

Colonel A.J. Genetti, Jr.
District Engineer
Corps of Engineers, U.S. Army
P.O. Box 17300
Fort Worth, Texas 76102

Dear Colonel Genetti:

This responds to your letter of September 3, 1986, requesting Formal Section 7 consultation as provided by the Endangered Species Act of 1973, as amended (Act). The Federal action under consultation is your proposal to issue a Section 404 and Section 10 permit to the Colorado River Municipal Water District (CRMWD) that will facilitate the construction and operation of the proposed Stacy Dam, Reservoir, and Pump Station on the Colorado River in Coleman, Concho, and Runnels Counties, Texas. The proposed action will affect the threatened Concho water snake (Herodia harteri paucimaculata).

The Concho water snake was listed as a threatened species on September 3, 1986. Critical habitat, proposed for the snake on January 22, 1986, was deferred until the economic data on the impact of that proposal could be gathered and assessed. This biological opinion is based upon the U.S. Army Corps of Engineers' (Corps) September 3, 1986, biological assessment; the July 1986 Draft Environmental Statement (DEIS); pertinent literature; data in our files including recent surveys conducted by the U.S. Fish and Wildlife Service (FWS) and CRMWD; and communications with Concho water snake authorities (Francis Rose, Norm Williams, Norm Scott, and Terry Maxwell) and a population ecology expert (Michael Soule).

On February 21, 1986, the Corps requested FWS prepare a Section 7 Conference Report for the Concho water snake under Section 7(a)(4) of the Act. That report, dated May 3, 1986, concurred with the Corps' finding that Stacy Dam was likely to jeopardize the continued existence of the (then proposed) Concho water snake and was likely to adversely modify proposed critical habitat. The conference report found no feasible alternatives that would accommodate the construction and operation of Stacy Dam. This biological opinion supercedes the conference report. Water supply alternatives previously suggested in the conference report were not considered in this opinion because they did not fit the feasibility criteria of reasonable and prudent alternatives.

BIOLOGICAL OPINION

The Stacy Reservoir Project is likely to jeopardize the continued existence of the Concho water snake. Reasonable and prudent alternatives are provided that remove the threat of jeopardy. Adverse modification of proposed critical habitat will also occur as stated in the conference report. The reasonable and prudent alternatives contained in this biological opinion dealing with habitat protection within the proposed critical habitat will continue to provide habitat for the snake, while other alternatives will make the range of the snake more continuous outside of the proposed critical habitat. Together, these alternatives will provide for the survival and recovery of the Concho water snake and thus eliminate adverse modification. Assurances that these alternatives will be funded and carried out must be made prior to final Federal approval of the permit application.

PROJECT DESCRIPTION

Project description information was obtained from a number of sources, including the permit application, biological assessment, State water appropriation permit, and DEIS. The proposed Stacy Dam would be located on the mainstream Colorado River at River Mile 615.1, 15.9 river miles downstream from the confluence of the Colorado with the Concho River. The dam would create a maximum pool of 19,200 surface acres, extending 46 miles up the Colorado and Concho Rivers in Coleman, Concho, and Runnels Counties, Texas. The conservation pool elevation (1551.5 ft., m.s.l.) would equal 554,340 acre feet (af). A pump station and pipelines would also be constructed. Construction of Stacy Dam is scheduled to start in May 1987.

Total yearly diversion from the reservoir allowed by the State water appropriation permit would be 103,000 af for domestic and municipal purposes, and 10,000 af for industrial purposes. Up to 15,000 af/yr of the above total can be a transbasin diversion to the Brazos River system, thus providing water for use by the City of Abilene and customers in Taylor and Jones Counties, Texas. Other cities planning to use Stacy Reservoir water include: Odessa, Big Spring, Snyder, San Angelo, Midland, Stanton, and Robert Lee. The maximum diversion rate authorized from the reservoir for municipal use is 191.34 cubic feet per second (cfs).

BACKGROUND INFORMATION

The Concho water snake (Nerodia harteri paucimaculata) and the Brazos water snake (Nerodia harteri harteri) together constitute the species Nerodia harteri, known collectively as Harter's water snake. The Brazos water snake, found only in the Brazos River drainage of Texas, was discovered in 1936 by Phillip Harter and described in 1941 by M. Trapido. The Concho water snake, found only in the Colorado River drainage of Texas, was discovered in 1944 by J. Marr and described as a distinct subspecies by Tinkle and Conant in 1961. Status surveys were conducted from 1979-1985 for both subspecies (Flury and Maxwell 1981, Scott and Fitzgerald 1985, Rose 1985) and indicated the Concho water snake's range had declined by 28 percent, primarily as a result of continuing habitat loss and modification. Conversely, these status surveys showed the range of the Brazos water snake had not declined significantly and existing threats to its habitat did not threaten its survival. Based on these surveys, FWS found the Concho water snake warranted Federal listing as threatened, and the Brazos water snake did not warrant Federal listing at this time.

Past and Present Distribution

Historically, the Concho water snake occurred over about 276 river miles of the Colorado and Concho Rivers, and a few associated tributaries. Now the subspecies is distributed discontinuously over approximately 199 river miles of mainstem reaches in Runnels, Tom Green, Concho, McCulloch, Coleman, Brown, Mills, Sea Sabs, Irion, and Lampasas Counties (see Figure 1). The highest concentration of snakes centers around the confluence of the Colorado and Concho Rivers. Recent surveys by CEMWD suggest a few Concho water snakes still occur in tributaries to the Colorado and Concho Rivers. A small population of water snakes (3 individuals) was found in Elm Creek and its tributary, Coyote Creek. Elm Creek is a tributary of the Colorado River near Bellinger, Texas. A few individual Concho water snakes were recently observed in three Concho River tributaries, Spring (2), Richey (2), and Lipan (1) Creeks, but are not known to represent viable populations.

Habitat Requirements

Concho water snake habitat has been described in several publications and reports (Tinkle and Conant 1961, Williams 1969, Conant 1973, Flury and Maxwell 1981, Tennant 1984, and Scott and Fitzgerald 1985). Habitat use differs significantly between adult and juvenile Concho water snakes. Juveniles are most often found in rocky or gravelly areas adjacent to shallow water flowing over rocky

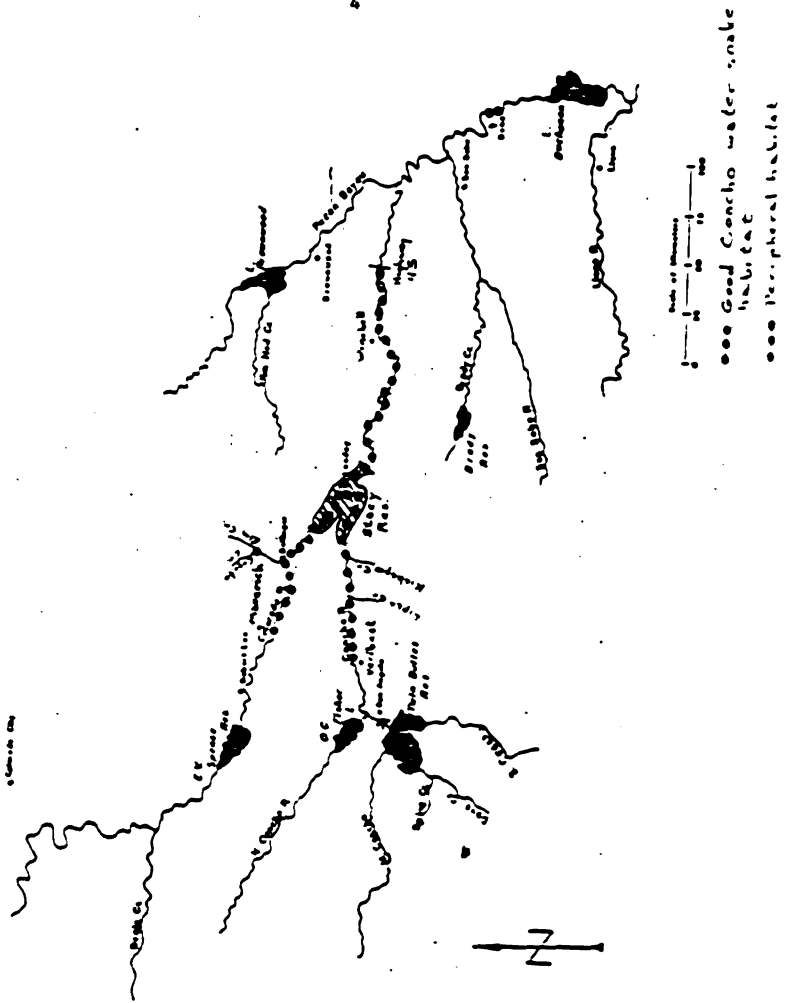


Figure 1

shoals or riffles. These areas are unshaded most of the day and contain a large percentage of flat rocks under which juveniles hide for thermal regulation and protective cover. Distribution of these habitat areas appears to be extremely important. Riffle frequency in occupied Concho water snake habitat ranges from 1.5 to 3 riffles per mile with the best habitat containing the highest riffle rates. In the reach of the Colorado River extending from the Highway 43 crossing downstream to the town of Bend, riffle frequency is only 0.5 per mile and Concho water snakes do not occur.

Adult Concho water snakes use a wider range of habitats including shallows, pools, overhanging woody vegetation, and rocky shorelines. Adults flee to the water for escape cover, with a preference for pools of greater than 2 feet in depth. While it is possible that individual adult Concho water snakes may survive in a reservoir habitat, no Concho water snakes, either adult or juvenile, have ever been found in any Concho or Colorado River reservoir.

Life History

Knowledge of the reproduction and population biology of the Concho water snake is limited. Williams (1969) conducted the only study of the population ecology of the species, and the following information is taken primarily from his thesis. The Concho water snake emerges from hibernation in mid-March to mid-April, and mating is thought to occur soon thereafter. Newborn snakes (young-of-the-year) were first seen by Williams on September 7, although they have been observed in late August by other biologists (Norm Scott, personal communication). Captive Concho water snakes have given birth to from 7 to 22 young (Tennant 1984), and Williams found that recruitment (young-of-the-year) increased the population eight-fold. Hibernation occurs in late October to late November, depending upon weather and temperatures.

Female Concho water snakes apparently reach sexual maturity at the end of the summer following birth, and rarely reproduce more than twice. Williams found that the life span of the adults rarely exceed three years, although data from other water snakes indicates that maximum life spans are generally much longer. Williams documented an 80 percent mortality of juvenile Concho water snakes over winter.

Concho water snakes feed only on fish, and have been observed feeding both during the day and at night. Feeding behavior involves anchoring the body around rocks, usually in shallow water, and probing among the rocks, trapping fish prey in cracks and crevices. Williams found that three fish species made up 94 percent of the food of his study population: red shiner (Notropis lutrensis), plains killifish (Fundulus zebrinus), and speckled

chub (*Hybopsis aestivalis*). Several other fish species have been found in Concho water snake stomachs, and the snake is thought to be an opportunistic predator on most small, shallow-water fishes.

Because of the more restrictive habitat requirements of juvenile Concho water snakes, their foraging habitat requirements were chosen as the primary factor in interpreting habitat modeling data (see Habitat Modeling section) and in designing the reasonable and prudent alternatives. The restriction of juvenile Concho water snakes to low-gradient, loose-rock shoals adjacent to silt-free cobble and gravel shallows or riffles is thought to result primarily from three factors: 1) juvenile snakes have limited energy levels (Pough, 1977) which restricts feeding to shallow waters where fish prey are most vulnerable; 2) the exposed rocky shoals act as thermal sinks, providing the necessary warmth for rapid growth as well as protection from terrestrial predators; and 3) the shallow water adjacent to the shoals provide relatively predator free feeding areas, as opposed to pools which support large predatory fish.

DESCRIPTION OF ENVIRONMENTAL BASELINE

Section 7 Interagency Cooperation Regulations require FWS to consider cumulative effects to listed species as well as effects due solely to the Federal action at hand in the biological opinion. An environmental baseline is developed prior to consideration of future cumulative effects. Categories of impacts that should be considered in this analysis include existing impacts not previously subject to consultation, impacts that have been evaluated through Section 7 consultation, and private and State actions (needing no Federal authorizations) reasonably certain to occur. This analysis has been performed in accordance with the legal opinion of the Department of the Interior, Associate Solicitor for Conservation and Wildlife, as set forth in a memorandum dated August 21, 1981, and the most recent Section 7 Regulations, 50 CFR Part 402, dated June 3, 1986.

Habitat of the Concho water snake has been affected by four large reservoirs on the mainstream Colorado and Concho Rivers, and by several smaller impoundments on tributary streams. Such water development has contributed to the current environmental baseline conditions for the snake. At least three separate aspects of these impoundments have resulted in losses of Concho water snake habitat: inundation of habitat, downstream impacts, and population fragmentation.

Within the influence of impoundments on both rivers, the gravel riffle habitat has been inundated, leaving reservoir shorelines apparently unsuitable for the snake. Below existing dams on the Colorado River, the normal river flow has been severely reduced or curtailed, and floodflow scouring which maintains the stream bed and defines channel characteristics has been eliminated. Without such scouring flows, the rocky streambed and riparian

zone become covered with silt, eliminating the gravel-bottomed riffle areas and shoals required for juvenile snakes, and allowing the former channel to become choked with vegetation. The documented losses of Concho water snakes as a result of Robert Lee Dam (E.V. Spence Reservoir) on the Colorado River are discussed later in this section.

A third, less understood impact to Concho water snakes resulting from dam construction has been population fragmentation. Prior to the construction of Lake Masworthy and Twin Buttes Reservoir on the upper Concho River system, there were documented Concho water snake populations in Dove Creek and the South Concho River. Even though the actual reaches that once supported snakes in most of these Concho River headwaters have not been inundated, the populations have been all but extirpated. The subsequent construction of Twin Buttes Reservoir on the South Concho River compounded the separation problem in this drainage (see Figure 1). Recent surveys of all of these tributaries located only two Concho water snakes in Spring Creek, a tributary of Dove Creek.

Population fragmentation is expected to have several adverse impacts: (1) it will reduce the amount of habitat available to the organism through physical isolation; (2) it will result in loss of the best available habitat, leaving more peripheral, suboptimum habitat; (3) it will restrict genetic interchange and population influx between populations; (4) it will leave the isolated populations much more vulnerable to environmental variations and natural catastrophes; and (5) it will prevent recolonization of suitable habitat after catastrophic losses. Isolation of Concho water snake populations by dams on the South Concho River is the probable cause of the disappearance of viable populations from these headwaters. Fragmentation must therefore be addressed in this opinion to assure viability of the three remaining populations of Concho water snakes after their separation by Stacy Reservoir.

In addition to flow reductions due to the mainstream reservoirs, there have been declines in flows of the Colorado and Concho Rivers resulting from additive impacts of smaller water impoundments and water diversions. These flow declines began very early in the history of European settlement in the area. Overall declines in the average annual discharge since 1935 of the Colorado River at Bellinger, Texas and the Concho River at Paint Rock, Texas are 65 and 61 percent; respectively. The loss of flow in these rivers has reduced or eliminated suitable habitat as well as impacting the fish food base for the Concho water snake. Also, water pollution and sedimentation problems have been exacerbated due to a lack of water diluting volumes.

Future impacts which act cumulatively to impact the species include increased stream siltation due to land management practices in the watershed, the continued use of agrichemicals which may

affect the snake or its food base, and changes in levels of point-source water pollution. There are no known major water development activities which could take place without Section 7 consultation.

Stream Flows and Concho Water Snake Habitat

Stream flow records for the Colorado and Concho Rivers were reviewed from 1908 to present (see attached). Comparisons were made before and after Robert Lee Dam was constructed on the Colorado River (1968) and before and after O.C. Fisher (1951) and Twin Buttes Reservoir (1962) were constructed on South Concho River. River channel morphology results from a complex series of parameters that combine to produce stability. Bankful flow (P_b), the discharge which fills the channel to capacity such that additional flow will cause overbank flooding, is a physical index of the most dominant range of channel-forming flows. The geometric mean of an annual peak flow series (P_{gm}) represents the relative magnitude of all peaks in the series and approximates P_b (Lowman 1982). The channel-forming effectiveness of P_{gm} is determined by its volume and frequency of occurrence (duration). Prior to construction of Robert Lee Dam, P_{gm} at Ballinger averaged 15,907 cfs (0.98 days/year). After Robert Lee, P_{gm} dropped to 4,374 cfs (0.08 days/year). Similarly, on the Concho River at San Angelo, P_{gm} before O.C. Fisher Dam was 17,391 cfs (0.30 days/year) and after construction dropped to 9,747 cfs (0.83 days/year). After construction of Twin Buttes, Concho River P_{gm} dropped to 1,285 cfs (0.81 days/year). Since 1963, with all dams in place on the Concho and Colorado Rivers, P_{gm} at Winchell, 34.5 miles below Stacy Dam site, has averaged 11,211 cfs (0.81 days/year); prior to 1963 it averaged 27,536 cfs (0.98 days/year).

FWS believes that the Concho River has stabilized at its presently reduced flows, perhaps due to the numerous low-head irrigation dams along its course, but that the Colorado River continues to change as a result of the construction of Robert Lee Dam. Reduction of P_{gm} from 15,907 cfs (0.98 days/year) to 4,374 cfs (0.08 days/year) in the Colorado River, measured at Ballinger, has resulted in silt accumulations, vegetation encroachment and stream narrowing at least to Maverick. Under existing flow regimens in the Colorado River, this process will continue downstream, resulting in the continuing reduction of snake habitat, particularly juvenile habitat.

In 1965-67, Norm Williams studied a flourishing population of Concho water snakes immediately below the yet-to-be constructed Robert Lee Dam. The habitat consisted of:

 "...deep still pools, shallow riffles, swift rapids,
 and isolated stagnant pools. The river bed varies
 from a hard, smooth limestone to gravel and deep mud.

"The water level fluctuates greatly during the year. In late August of 1966, the river was a fairly fast moving stream, with water filling the bed. During the fall, winter, and spring months rain filled the river to overflow. Drought periods during the summer months lowered the water level appreciably so that only a slow trickle was observed. The width of the river varied during periods of normal flow from a few feet to as much as 20 yards. The depth varied normally from a few inches to two feet in isolated pools. During the flooding of the late spring of 1967, a depth of ten feet or more was not uncommon. During the one year period of this study noticeable changes in the banks and river bed occurred due to this flooding. New sand and gravel bars and debris piles were formed. The river bed was altered slightly to form new riffles and pools" (Williams 1969).

Today, that same reach of the Colorado River is a low-flow stream channel about 10 feet wide. Silt and vegetation have encroached on most of the original channel, covering the rocky riffles and burying the pools. Concho water snakes are no longer found in this reach of the Colorado River. Scott and Fitzgerald (1985) described it this way:

"We found that the habitat immediately below Robert Lee was very different from the same area figured in Williams (1969). Instead of a swift-flowing stream running over rocky riffles between shallow and deep pools, we found a muddy, sluggish trickle choked with salt cedar. Apparently, the lack of scouring floods allowed the rocky streambed to become covered with silt which provided an excellent substrate for the invasion of salt cedar and other perennial trees, grasses, and sedges. Brnovak (1973) had noted similar changes as early as 1973-1975. About 45 km below Robert Lee, silt deposition was noticeably less, rocky riffles appeared, salt cedar was much less common, and we found the first *N. h. paucimaculata*. Downstream from this point near Maverick, the species seemed to be regular if not abundant."

Below Maverick, the effects of the reduced flows from Robert Lee Dam have not adversely altered water snake habitat. In this instance, lower flows themselves do not appear to be detrimental to the snake or its principle food items, but above Maverick the loss of gravel riffles for juvenile snake foraging and resting habitats due to siltation and vegetation encroachment is detrimental. Good water snake habitat on the Colorado River presently extends downstream from Maverick to Winchell, a distance of 123 miles.

Below Winchell, geology of the area dictates gradual changes in the Colorado River, resulting in fewer and smaller riffles. For

about the next 24 miles of stream, Concho water snakes persist but their distribution centers around fewer and fewer riffles. Eventually, the snake disappears completely from the Colorado River, somewhere near Highway 43, and for the next 80 miles no Concho water snakes have been found. Downstream from this devoid reach, below Bend, Texas, a small, remnant population of Concho water snakes exists in 10 miles of habitat. The reason for the lack of water snakes above Bend has been explained by Scott and Fitzgerald (1985) as a lack of suitable habitat. Riffles are too widespread to allow successful colonization and the sandstone substrate may not allow for good gravel habitats. In other areas, where clean gravel riffles occur more frequently than every half mile, snakes prosper. Where gravel riffles decrease to less than 1 per mile or the riffles become embedded in silt or sand, snakes decline or disappear.

Habitat changes and pollution in the upper Concho River have eliminated Concho water snakes from San Angelo to Veribest (11 river miles). The Concho River still supports a good population of Concho water snakes from Veribest to the confluence of the Colorado River.

HABITAT MODELING

As a part of this consultation, FWS initiated additional collection of data on Concho water snake habitat. Data collected were primarily hydrologic and were used to establish flow levels necessary for survival of the water snake, to quantify habitat losses to the project and the potential habitat gains through various alternatives. The FWS Instream Flow Incremental Methodology (IFIM) was used to analyze currently available habitat and to predict habitat levels at various stream discharges. Biological data on suitability of various habitat parameters (water depth, water velocity, substrate, and cover) were assembled by a group of five biologists knowledgeable about the Concho water snake or similar species, and by a group of three biologists knowledgeable about the fishes which form the food base of the snake. These suitability data were assembled during a three day meeting in Midland, Texas on September 9-11, 1986. Measurements of existing physical conditions on the Concho and Colorado Rivers were taken from September 22 - October 3, 1986, using standard IFIM methods. Biological and physical data were analyzed at various flows using the Physical Habitat Simulation (PHABSIM) program developed by the FWS for other projects. This program provided predictions of available habitat at various flows, as weighted useable area (WUA), which is the available habitat weighted for levels of quality. Habitat estimations were made for juvenile foraging area, juvenile resting area, adult foraging area, adult basking area, and the areas needed by four species of forage fish. The program also provided predictions of the WUA which exists in the area to be lost to inundation, altered by project stream flow changes, or gained by various manipulations of physical habitat parameters.

PHABSIH analysis estimated there are presently 6,311,788 ft² of WUA of juvenile foraging habitat in the Colorado and Concho Rivers. After consideration of all the habitats utilized by Concho water snakes, juvenile foraging habitat was the parameter chosen to describe impacts associated with Stacy Dam because FUS believes it is the most limiting factor for the subspecies. The analysis also showed that total losses associated with the Stacy project (inundation zone and reduction of flows) will be 1,637,308 ft² WUA (26 percent). Reasonable and prudent alternatives presented in this opinion compensate for these projected losses.

Viability Analysis

Much of the rationale behind the reasonable and prudent alternatives relates to this modeling (see attached viability analysis). Although several of the assumptions in this model are open to question, the basic ideas appear correct. These include: even without Stacy Dam, the Concho water snake is likely to be lost in the upper Colorado River and decline greatly in the lower Colorado River; loss of habitat increases vulnerability; increase in habitat is more important than an increase in numbers in the face of catastrophe; riffle frequency determines isolated population survival; population fragmentation increases susceptibility to extinction (especially due to catastrophe); greater environmental variation (flood or zero flows) promotes extinction; management intervention may enhance the viability of the snake above current (pre-dam) status.

The viability model suggests that without alternatives, construction of Stacy Dam will lead to the loss of Concho water snakes in the Colorado River but not in the Concho River, and will increase chances of catastrophic extinction by up to 10 fold. It also suggests the following alternatives will reduce or even eliminate that risk: 1) reduction of environmental variation (reduce very high or zero flows); 2) creation of additional habitat (riffles close enough to permit frequent dispersal), especially in the Colorado River; 3) artificial dispersal of genetic materials. These three suggestions, plus the protection of isolated areas, form the basis of the following alternatives.

Four basic assumptions directed development of these alternatives: 1) Concho water snake habitat, that will allow the subspecies to carry out all phases of its life history, can be artificially created and maintained; 2) no changes should be suggested for river reaches supporting good populations of Concho water snakes because efforts may do more harm than good, and because an increase in the numbers of snakes is less important than the expansion of snake habitat; 3) newly created habitats may not be of equal value (WUA) to habitat being lost, because creation of new habitat is yet to be tested while the reaches being lost contain some of

the best Concho water snake habitat available; 4) long-term commitments to best management practices will be maintained by all parties.

REASONABLE AND PRUDENT ALTERNATIVES

Reasonable and prudent alternatives are those alternative actions that can be implemented in a manner consistent with the intended purpose of the action and consistent with the scope of the Federal agency's authority and jurisdiction and will avoid jeopardizing the species. The principal objective of these alternatives is the creation of habitat for the Concho water snake within its historic range. Changes in water regime resulting from Stacy Dam and implementation of these alternatives are expected to result in the loss of 1,738,033 ft² (WUA) of juvenile water snake habitat and the creation of up to 2,629,449 ft² (WUA) of new habitat. Occupation of the new habitat by Concho water snakes will be carefully monitored to assure long-term success. Flexibility to test methods of creating the necessary water snake habitat will be provided via a cooperative agreement that allow progressive implementation of alternatives. Successful alternatives will be implemented rapidly; alternatives that fail to achieve the required goal will be improved. There are four basic areas that are the focus of this consultation regarding impacts of the proposed Stacy project on the Concho water snake: (1) the Colorado River downstream from Stacy Dam to Pecan Bayou, (2) Stacy Reservoir within and adjacent to the maximum reservoir pool, (3) the Colorado River upstream from Stacy Reservoir to Spence Reservoir and, (4) the Concho River upstream from Stacy Reservoir to San Angelo.

Reasonable and prudent alternatives have been developed to eliminate jeopardy and adverse modification, and involve an integrated set of activities in each of the areas of concern. These alternatives act together as a functional unit, and must be fully implemented in each area to insure the continued existence of the Concho water snake. The continued existence of the Concho water snake after Stacy Reservoir will also be supported by active research incorporated into long-term management efforts. These efforts will fall upon CRMWD, through Corps permit requirements, and are outlined in the following alternatives.

I. Monitoring

CRMWD will monitor the Concho water snake and its habitat in order to provide a continuous record of their well-being and to determine if the alternatives are working as planned. Monitoring will occur three times each year, in April-May and again in September and October, in each of the three river reaches isolated by Stacy Reservoir (upper Colorado River, lower Colorado River, and Concho River). Five specific juvenile habitat areas supporting healthy populations of Concho water snakes will be selected in each reach. These permanent monitoring sites will be searched completely once

each spring and twice each autumn for snakes. Lengths and weights of all Concho water snakes at each site will be recorded, the animals will be cold branded for individual identification and then released. Presence of food items will be noted, but the snakes should not be handled so as to cause them to regurgitate food items. Numbers of individuals of other species of Nerodia should also be recorded.

Young-of-the year snakes are expected to make up the bulk of the autumn individuals measured. A second trip to each locality about four weeks after the first autumn marking will then be made in an attempt to recapture and remeasure marked snakes in order to determine growth and survival. Spring monitoring will look for marked snakes as well as measuring and marking individual snakes. During the autumn monitoring period, fish near each site will also be sampled by seine to determine approximate estimates of abundance and species diversity. Flow rates, suitability of the habitats for snakes, length of the selected habitats, vegetation encroachment and other physical parameters important to water snakes will also be noted. Stream channel profiles will be measured each year for each monitoring site using the suitability criteria and IFIM methods used during this consultation. Suitability measurements of selected juvenile snake habitat are expected to yield better criteria through experience. Feedback through monitoring will help to ensure that management alternatives are modified with time to more efficiently preserve constituent elements of proposed critical habitat. An annual report on monitoring will be submitted to the FWS by December 31 of each year. Monitoring is necessary during construction of Stacy Dam and the filling of Stacy Reservoir, and should continue for 10 years.

II. Studies

Although several status and distribution surveys have been carried out on the Concho water snake, little information is available on basic life history and biology. The following is a list of studies necessary to more accurately determine the habitat/life stage needs of this species. Information derived from these studies will be continuously incorporated into ongoing alternatives in order to "fine tune" management efforts. All should start immediately.

- A) Life history study, including age, growth, reproduction, hibernation, food and feeding, behavior, predation, competition, habitat descriptions and utilization, thermo-regulation and movement. Other likely biological parameters may be added as the study proceeds. Five years.

- B) Genetic viability of the existing population and the isolated subpopulations. Two years.
- C) Physical habitat studies, including stream channel stability, sediment source and deposition, vegetation encroachment and water chemistry. Three years.
- D) Information on availability and distribution of food items. Two years.
- E) Energy budget and growth of all three water snake species at different life stages under natural and controlled conditions. Three years.
- F) Evaluation of the various proposed management alternatives within this opinion, with recommendations for improvements. Ten years.

Studies will act, along with monitoring (I), to ensure that active management alternatives are appropriately adjusted to diminish adverse impacts to proposed critical habitat. Some of this information would be needed regardless of the construction of Stacy Dam, while other important studies are a direct result of the proposed construction. FWS is willing to share the cost of the life history and energy/growth studies with CRMWD. All other studies are the responsibility of CRMWD. Study plans must be approved by FWS before studies are initiated.

III. Upper Colorado River Management. (net +249,197 ft² WUA)

The upper Colorado River between Robert Lee Dam and Maverick once supported a good population of Concho water snakes, prior to the closure of Robert Lee Dam. Presently, no Concho water snakes occupy this reach but continue to do well from Maverick to below Ballinger. The objectives of this alternative are to reconstruct Concho water snake habitat in the Colorado River from Robert Lee Dam to Maverick and to stop the continued downstream encroachment of silt and vegetation on juvenile foraging areas below Maverick. This alternative will create 349,922 ft² of WUA of Concho water snake juvenile foraging habitat, but will also result in the loss of 100,725 ft² WUA below Maverick due to increased flows. The losses (10 percent) are more than offset by the gain (34 percent) and the expansion of snake habitat by more than 30 river miles. The following items will be necessary to implement the rehabilitation.

A. Flow releases required from E.V. Spence Reservoir:

It is the responsibility of CRMWD to create and maintain good Concho water snake habitat in this reach. The following alternatives are designed to meet that responsibility. Options that delay the alternatives due to high water or drought do not abrogate that overall responsibility.

1. Minimum Flow.

In order to provide suitable habitat for the Concho water snake and its food base, a minimum flow in the channel year round is required. CRMWD will release water from E.V. Spence Reservoir at flows sufficient to maintain at least 10 cfs throughout the reach of the Colorado River from Robert Lee to the USGS flow gauge at Ballinger. This flow will not be dependent upon presence or absence of flow into the reservoir, is in addition to releases for downstream water rights and shall not be depleted below the 10 cfs level by any water user. A 10 cfs flow will provide optimal juvenile feeding habitat for Concho water snakes in this reach at its present configuration, as shown by PHABSIM modeling.

2. Channel Maintenance Flow.

To maintain a stable channel morphology, a high flow is needed for flushing of sediments. Although the flow that originally formed the Colorado River channel in this area (Pgm) is no longer possible [15,907 cfs (0.98 days/year)], it is expected that 600 cfs released from E.V. Spence Reservoir for a period of 3 consecutive days once every 2 years should be sufficient to maintain a channel of reduced size. This flow must be released during the winter (November through February) to avoid adverse effects on juvenile and hatching Concho water snakes, and should correspond with natural flood events, if available, to maximize the scouring effect. The release of channel maintenance flows will not be dependent upon flow into the Reservoir. Maximum flow release from Robert Lee Dam is dependent upon water levels. If insufficient head exists to release 600 cfs during the first year of a two year cycle, maximum flows available will be released the second year for the same duration (3 days).

High flow releases from Lake E.V. Spence will be made in such a manner as to minimize harm to Concho water snakes. Due to prior commitments of CRMWD to meet downstream water right holders water requirements

(such releases normally occur in July and August, annually, and have duration of 48 to 72 hours), it may be necessary from time to time to release water at rates up to 500 cfs. CRMWD will use its best efforts not to exceed 75 cfs after August 20, the earliest hatching date known for Concho water snakes. In addition to special releases, it may be necessary from time to time to utilize the spillway structure at Lake E.V. Spence to alleviate flood conditions that may develop upstream from Robert Lee Dam in accordance with the terms and conditions contained in the water permit to CRMWD from the State of Texas, authorizing the impoundment of water in Spence Reservoir.

CRMWD will not be required to release water (as described in this section) during periods of extended drought or conditions that may call for water rationing by the municipalities serviced by CRMWD.

B. Channel and habitat rehabilitation:

1. Vegetation and Silt Removal.

In order to recreate appropriate juvenile Concho water snake habitat in the upper Colorado River from Robert Lee to near Maverick (30 miles), it will be necessary to remove the existing encroaching silt and vegetation from the riffle areas. The requested channel maintenance flow releases are not expected to effectively remove already established vegetation. Mechanical removal is suggested. CRMWD should submit a plan for this effort by May 1987 for Corps and FWS review and approval.

2. Addition of Rock.

Channel maintenance flows move rocks downstream. Construction of Robert Lee Dam has prevented the recharge of the rock substrates that were naturally found in this reach of the Colorado River. Existing rock substrates are now either transported out of the system or have become covered with sediment. It will be necessary to reconstruct this substrate. Rock will include a mix of sizes from medium gravels to large boulders, and should be placed both laterally and cross channel to form bars and riffle areas. Rock used in habitat rehabilitation or creation should be of slab limestone origin and at least 50 percent (including all size categories) should be flat, slab-like rock. The new habitat areas must have shallow water

associated with the rock, and a general slope of 10 percent or less. Riffle habitats will be clustered in groups or complexes and will have an average frequency of 3 per mile, similar to that found in the best known Concho water snake habitat. Riffles will range in length from 100-450 feet and average 150 feet long. Width of the rock/gravel shoals should be sufficient to allow snakes to utilize them from the low flow periods (10 cfs) to the ordinary high water mark. Placement of new habitat must be designed to minimize sedimentation or washout problems and mimic natural pre-Spence Reservoir patterns. New habitat will be monitored for success and replaced or modified as necessary to ensure long-term success in Concho water snake survival and reproduction.

C. Concho water snake reintroduction:

It is not likely that adequate numbers of Concho water snakes will quickly move upstream to colonize all the newly created habitat. It will thus be necessary to move snakes upstream to the restored habitats. Such transplants are to come from the area on the Colorado River to be inundated by Stacy Reservoir and will consist of approximately equal numbers of males and females. Snakes should not be moved into newly created habitat until the presence of a sufficient food base has been confirmed. This food base is expected to move in the area naturally, but may have to be stocked if natural movement does not occur rapidly.

D. Protection of rehabilitated habitat and existing, minimum and dominant flows:

For long-term maintenance of the rehabilitated habitats and flows, it will be necessary to protect the newly created habitat areas from water and gravel harvesting, lowhead dam construction, road and bridge construction and any other channel modification or development that might be proposed. CRWMD will use its legal authorities to prevent water development within the Colorado River channel, and elsewhere in the watershed when such development will impound over 200 acre feet. CRWMD will also discourage water development within the watershed under the 200 acre feet category. Protection of flows by authority of CRWMD may benefit proposed critical habitat on the Colorado River above the inundation of Stacy Reservoir.

IV. Lower Colorado River Management (net + 2,059,019 ft² WUA).

Concho water snake habitat in this reach presently varies from good between Stacy Dam and Winchell, to fair between

Winchell and the Highway 45 bridge, to unoccupied below Highway 45. The goal of this alternative is to protect the good habitats and to upgrade the fair and unoccupied reaches to good habitats. Flow reductions will result in the loss of 186,758 ft² WUA of juvenile foraging habitat that will be offset by the creation of 2,245,777 ft² WUA of new habitat. This alternative serves to protect critical habitat constituent elements below Stacy Dam through guaranteed minimum flows, channel maintenance, proper stream temperature regime and habitat improvement actions.

A. Flow releases from Stacy Reservoir:

1. Minimum Flow.

Release flows from Stacy Dam sufficient to maintain 11.0 cfs in the Colorado River between April and September, and 2.5 cfs between October and March of each year, from Stacy to Pecan Bayou. These flow requirements (slightly higher than flows stipulated in the CRMWD State water permit), represent instantaneous minimums, and are to be protected throughout the lower reach of the river. Eleven cfs minimum flow was chosen for Concho water snakes because the PHABSIM model indicated that it was the lowest flow that would provide near optimal juvenile foraging and resting habitat in the reduced Colorado River channel below Stacy. Continuous flows are necessary to maintain juvenile foraging habitats (shallow riffles) and for the forage fish upon which the snake depends. These flows will not be dependent upon the presence or absence of water flowing into Stacy Reservoir, and must be protected from legal and illegal water diversion.

2. Channel Maintenance.

It will be the responsibility of CRMWD to assure that the Colorado River below Stacy Dam remains suitable habitat for the Concho water snake. Present flow (Pgm) at Stacy required to maintain the existing channel are 7,728 cfs (0.60 days/year). Due to reduced discharges following the construction of Stacy Dam, the river will stabilize at a smaller channel. A computed flow of 2,500 cfs for 2 consecutive days once every 2 years will be sufficient to maintain snake habitats in the new channel. The 2,500 cfs will be released according to the same criteria under which channel maintenance flows are released from Spence Reservoir (see III A.2). The release of this channel maintenance flow will not be dependent upon flows into Stacy Reservoir. Periodic flows from Mustang and Home

Creeks will also provide some flushing of the Colorado River, but alone will not be sufficient to stop encroachment of vegetation on riffle areas that make up juvenile snake habitat, and will do nothing to maintain the reach from Stacy Dam to Mustang Creek. If 2,500 cfs fails to provide complete flushing of sediments below Stacy Dam, CRMWD will be responsible for mechanical removal.

3. Temperature.

Release of waters from Stacy Dam significantly colder than the ambient water temperature of the Colorado River will result in the death of many water snakes and most of the forage fish for many miles downstream. During warm weather, Stacy Reservoir will stratify, resulting in the deeper waters (hypolimnion) maintaining a consistent temperature of about 55° F. During autumn, winter, and spring, stratification is disrupted and the reservoir will be approximately the same temperature as the river. Release of hypolimnetic waters from Stacy Reservoir during the summer months when ambient river water temperatures could be 80°F must not occur. When the reservoir is stratified, all releases will come only from the warmer, epilimnetic surface waters. Because channel forming flows will be released only during November-February when the reservoir is not stratified, they will not be a problem. Permit release flows required by the Lower Colorado River Authority should come only from epilimnetic waters.

B. Habitat Improvement

1. Stacy Dam to Winchell. (-186,758 ft² WUA)

Within the reach of the Colorado River from Stacy Dam to Winchell, water snake habitat is good, and snakes are abundant. Changes in water flows after construction of Stacy Dam are expected to reduce Colorado water snake habitat in this reach by 186,758 ft² WUA. However, the river is not expected to aggrade as happened below Spence Reservoir because of differences in soil type and land management practices below Stacy. Snakes are expected to remain in this reach of the river, but at reduced numbers corresponding to the reduced habitat, and no further efforts (besides those discussed in A. above) are proposed.

2. Winchell to Pecan Bayou (+2,245,777 ft² WUA)

From Winchell to Pecan Bayou, the Colorado River changes its bedrock strata and enters an area of extensive sandstone. Snakes and riffle habitats continue to be found throughout the first 24 miles of this formation, but at a reduced rate, and eventually disappear completely. Within the river reach between Winchell and Pecan Bayou (49 river miles), CRWWD has an unparalleled opportunity to improve and create new water snake habitat in an area that now has only limited water snake utilization. Reduced flows in this reach due to Stacy Dam should allow extensive instream manipulation in order to create new juvenile water snake feeding and resting habitat. Numerous low head dams or gabions will be constructed that will act as partial barriers to gravel and cobble, creating new riffles above and below them. Height of the barriers should be sufficient to create rock riffles 450 feet long associated with each barrier, but should not exceed one foot. These newly created snake habitats should be interspersed with existing shoals and riffles to provide an average of at least three per mile of stream. Barrier shape should concentrate low water flows towards the active channel of the stream, and the barriers should be firmly attached to the substrate to withstand the high flows anticipated from at least a 100 year flood. If natural rock recruitment is not sufficient to form riffles and shoals in association with these barriers within 3 years following their construction, then rock meeting the criteria set forth in III B2 will be placed above and below these barriers to form the specified habitat. Reaches of the Colorado River below Pecan Bayou are not recommended for improvement because sustained maintenance of riffle habitats within the area may be physically impossible. Flows and sand/silt contributed by Pecan Bayou and the San Saba River and other tributaries are likely to wash out or bury instream structures and associated snake habitats during flood flows.

V. Concho River Management

There are presently 19 low head dams (some exceeding 6 feet in height) on the Concho River below San Angelo. These dams interrupt gravel transport downstream, inundate long stretches of river, and may hinder snake movement. The FWS considered removal of all or some of these structures in order to expose additional juvenile foraging habitat. However, ownership and legal status of the dams is unknown, and their existence may have even benefited water snakes

by stopping downstream changes to the Concho River that have destroyed habitat below Robert Lee Dam on the Colorado River. Therefore, CRMWD will determine the status of each of the low head dams on the Concho River below San Angelo and investigate the feasibility of their removal. This report should be completed and sent to the Corps and FWS by December 31, 1987. If removal of all 19 dams is feasible, a total of 142,389 ft^2 (WUA) of juvenile water snake habitat could be created.

VI. New Reservoir Habitats, Stacy Reservoir Management
(+33,750 ft^2 WUA)

In order to replace juvenile foraging habitat lost due to Stacy Reservoir (-1,450,550 ft^2 WUA), habitat along the new reservoir shore must be made more suitable for Concho water snakes. Based on available information on both subspecies, FWS believes that the Concho and Brazos water snakes are ecological similar. Although they are on different river systems, both seem to be limited by similar habitat features (e.g., flat shallow rocky riffles). Although no Concho water snakes have been found in reservoirs, all ages of the Brazos water snake (*N. h. harteri*) have been found along the upper reaches of Possum Kingdom Reservoir and Lake Granbury on the Brazos River. Reservoir morphology on the Brazos River differs significantly from existing reservoirs on the Colorado and Concho Rivers, with the former occurring on stream cut limestone beds in a topography of moderate relief and the latter on silt and loam in an area of low relief. The major rocky areas resembling water snake habitat on Spence, Twin Buttes, Nasworthy and O.C. Fisher Reservoirs (Colorado and Concho River Reservoirs) are found along the dams as riprap. Because of the embedding and boulder size used for dam riprap, Concho water snakes do not inhabit these areas. FWS believes that the large, imbedded rock does not provide suitable habitat for water snakes, hence they are not found there. Stacy Reservoir is to be built in a limestone area geologically similar to Possum Kingdom and Lake Granbury, but with less relief, and may provide some water snake habitat. In order to improve chances of Concho water snakes inhabiting Stacy Reservoir, 45 new reservoir habitats will be constructed. Rock sizes will range from medium gravels to large boulders of slab limestone origin, at least 50 percent of all size categories being of flat, slab-like limestone. The new reservoir habitats are to be 150 feet wide and reach from 5 feet above the conservation pool level (1,551.5 ft.) of the reservoir down to the river channel (Figure 2). Extending new reservoir habitats from above the high water level to the river channel will allow utilization at all reservoir levels. Slopes should not exceed 1 in 10, the maximum reservoir shoreline slopes Brazos water snakes inhabit. This slope will allow at least 5 feet of

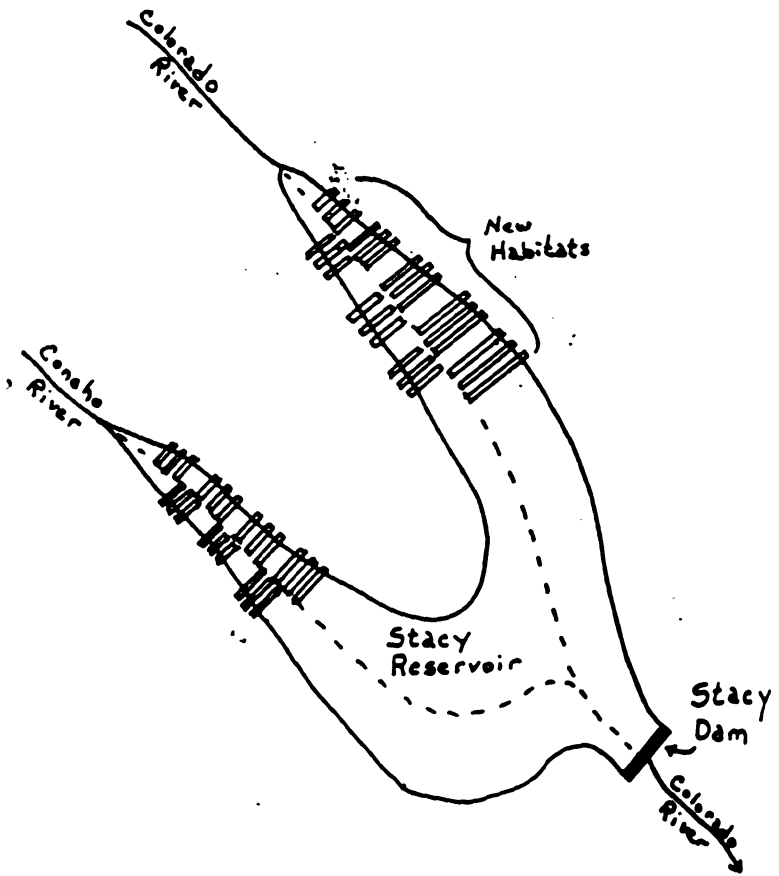


Figure 2. New Habitats, Stacy Reservoir.

juvenile water snake foraging area at the preferred depth of less than 0.5 feet. New reservoir habitats, like riffles in the rivers, will be clumped (3/mile) and concentrated at the upstream 1/3 of the reservoir. Snakes will occupy the habitats naturally as rising reservoir waters inundate natural riffles. Snakes forced out of the river channels by rising reservoir levels will survive in these areas until the fluctuating water level drops again. Permanent occupancy may also occur on habitats usually submerged. It is unknown if changing water levels will result in siltation of these artificial habitats, but if silt, sediments or vegetation does become a problem, plans to clear them must be made. Stacy Reservoir habitat improvements are recommended to conserve some constituent elements of proposed critical habitat within the inundation zone. Such measures may allow snakes to occupy the reservoir and reoccupy both river channels during lower reservoir levels. When 43 artificial habitats are constructed, juvenile feeding and resting habitat will be increased by 33,750 ft² WUA, 1.9 percent of the lost habitat. Care should be taken to prevent the artificial habitats from becoming boat launching ramps by limiting access to them. This alternative may be phased in over a 15 year period in order to assess success and correct any flaws that might exist. CRWMD must complete at least 10 habitats, scattered throughout upper 1/3 of the reservoir area by the time the dam is closed. Design and construction of the remaining structures will depend upon success of the first 10 habitats. Corps and FWS will make that evaluation within 5 years after the habitats are flooded.

Additional basking areas will be provided within the reservoir by allowing the larger trees to stand rather than removing them. A good forage base of minnows is expected to inhabit the reservoir, including Notropis lutensis, Notropis stramineus, Pimephales promelas, Pimephales vigilax, and Gambusia affinis.

VII. Tributary Stream Habitats

While loss of prime water snake habitat and proposed critical habitat in the Colorado and Concho Rivers is being partially offset by habitat improvements above and below Stacy Reservoir, additional secure habitat is needed. Several of the smaller tributaries of the Colorado and Concho Rivers are known or believed to support Concho water snakes. CRWMD personnel captured 5 Concho water snakes in Elm Creek and its tributary, Coyote Creek in 1986. Kickapoo Creek, Spring Creek, and perhaps Lipan Creek may still support a few Concho water snakes. CRWMD will negotiate with private land owners for protection of Elm Creek and its tributary in the area of suitable water snake habitat (7 miles). Protection of Elm Creek should provide long-term preservation of Concho water snake habitat. CRWMD will continue to search tributary

streams to determine if additional Concho water snake populations occur.

VIII. Maintenance of Genetic Heterogeneity.

The isolation of Concho water snake populations by Stacy Reservoir could result in a loss of genetic diversity. Isolated artificial populations and isolated natural tributary populations could suffer the same fate. In order to insure sufficient genetic heterogeneity in all populations, it will be necessary to move snakes from one population to another. At least five female Concho water snakes should be transferred to each of the 3 isolated populations from its nearest neighboring population once each year during mid summer (June-August). Population geneticists have determined that only one individual is necessary to maintain the heterogeneity, but survival of transferred snakes suggests a slightly larger number is more appropriate.

IX. Employment of a Full-Time Biologist.

CRNWD will hire a full-time biologist, acceptable to CRNWD and FWS, to oversee the implementation of these alternatives and interact onsite with the engineers and equipment operators during construction of Stacy Dam and the new snake habitats. This individual must have the authority to assure that all stipulations are followed and be able to interact with FWS to alter the alternatives if new ideas or methods of protecting water snake habitat are determined. Monitoring snake habitats and portions of the proposed studies could also be supervised by this individual. A ten year length of employment will be necessary to coordinate and analyze all alternatives.

X. Cooperative Agreement

An agreement will be signed by the principal parties to assure that all phases of the biological opinion will be carried out before and after construction of Stacy Dam. This agreement will also point out joint responsibility for modifying alternatives if future information indicates adjustment is necessary.

Nonconstruction alternatives (I, II, V, IX, and X) should begin as soon as practical. Alternatives III, IV, VI, VII will be delayed for up to one year in order that thorough field studies and much additional data concerning the Concho water snake as possible can be gathered. Alternative VIII need not start until Stacy Dam is closed.

RISK ANALYSIS

A risk analysis for the Concho water snake was performed using a panel of the most knowledgeable biologists available (analysis attached). The conclusion of that work was that without Stacy Dam, the subspecies had a 11 percent chance of extinction over the next 25 years. With Stacy Dam in the equation (but without any reasonable and prudent alternatives), extinction chances increased to 40 percent over the same period. The alternatives included herein as reasonable and prudent decreased extinction probability by 1-11 percent independently, with the highest decreases coming from maintaining remaining water snake habitat (minimum and channel forming flows), creation of artificial riffles in historic reaches not now supporting water snakes, and creation of artificial habitats. Chances of individual alternatives reducing extinction are not cumulative unless considered that way by the original panel. When the panel considered the impacts of the construction of Stacy Dam and the cumulative effects of all the proposed alternatives, they estimated the chances of water snake extinction to range from 10-25 percent, indicating the impact of Stacy Dam to range from a +1 to a -14 percent over the existing river conditions without Stacy. However, none of the panel considered Stacy would benefit the survival of the Concho water snake, with the most optimistic scores indicating a neutral effect.

One factor that was not considered in the risk analysis was the continued downstream encroachment of silt deposition in the Colorado River below Spence Reservoir. Hydrologists believe the Colorado River will continue to aggrade between Maverick and the confluence as a result of Robert Lee Dam, but at a slower rate than has occurred between 1968 and present. With the minimum and channel maintenance flows requested from Spence Reservoir as part of reasonable and prudent alternatives for Stacy, these same hydrologists believe that this reach of the Colorado River will stabilize sooner and with more water snake habitat than if those flows were not available. It is unknown how this information might have affected the risk analysis panel, but some sensitivity testing of the model indicates it is insensitive to habitat loss unless such loss is very widespread. It is likely that knowledge of the continuing loss of Colorado River habitat would have resulted in the panel slightly increasing the chances of extinction under the "no change" alternative and slightly decreasing the chance of extinction under the "Stacy Dam" alternative.

INCIDENTAL TAKE

When the reasonable and prudent alternatives are implemented, there will still be some incidental take of Concho water snakes, but not to the extent that it will jeopardize the subspecies. Construction at the dam site may directly kill some individuals. Hatchlings that are present during reservoir filling may succumb due to a lack of proper feeding conditions, cover, or greater

predation. A few additional snakes may be taken in the process of improving the existing rocky riffles. Concho water snakes will also be taken above and below Stacy Reservoir as new stream flows alter existing habitats. Under these circumstances, FWS is required to address 1) the impact of this taking upon the subspecies, 2) reasonable and prudent measures necessary or appropriate to minimize such impacts, and 3) terms and conditions that must be complied with by the Corps or applicant that minimize these impacts.

The maximum extent of incidental take anticipated is that which occurs in conjunction with the loss of 1,738,033 ft² WUA. As stated, above, such take will result from dam construction, reservoir filling, altered flows and habitat manipulation efforts. A reasonable and prudent measure to reduce take is that a CERNWD employee will be on hand at times when take is likely to occur, to salvage snakes. Terms and conditions of incidental take are: 1) that CERNWD notify FWS prior to any activity likely to result in take, 2) that any snakes salvaged be immediately reported to FWS or placed as per prior agreement with FWS, and 3) any Concho water snake mortalities be reported to FWS. If the extent of anticipated incidental take is exceeded because destruction of juvenile habitat is greater than 1,738,033 ft² WUA, the Corps must reinstate Section 7 consultation and stop CERNWD from further habitat destruction that will result in takings until a new biological opinion with an updated incidental take statement is issued.

SUMMARY-BIOLOGICAL OPINION

The Stacy Project, if built without the reasonable and prudent alternatives presented in this document will jeopardize the continued existence of the Concho water snake and adversely modify its proposed critical habitat. In the Section 7 Interagency Cooperation Regulations (50 CFR 402.02) "...jeopardize the continued existence of (means) to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both survival and recovery of a listed species in the wild..." "Destruction of adverse modification (means) a direct or indirect alteration that appreciably diminishes the value of critical habitat for both survival and recovery of the ...species." "Reasonable and prudent alternatives (refer) to alternative actions identified through formal consultation... that the Director believes will avoid jeopardy or adverse modification...."

In the case of the jeopardy standard, guaranteed implementation of reasonable and prudent alternatives will eliminate the likelihood of jeopardy by restoring deteriorated habitats, bringing disjunct populations together, breaking physical barriers to gene flow, guaranteeing stream flows for critical life stages and forage fishes, and monitoring and studying population health and adjusting management activities. Proposed critical habitat will be modified with all alternatives in place, but as above, the

alternatives reduce the impacts of such modification within the proposed critical habitat to levels that do not significantly diminish the value of proposed critical habitat (or its constituent elements) for survival and recovery of the Concho water snake. Therefore, the Stacy Project with reasonable and prudent alternatives adopted, is not likely to result in the "destruction or adverse modification" of the proposed critical habitat, nor is the project likely to "jeopardize the continued existence of" the Concho water snake.

CONCLUSION

This biological opinion is based on the best scientific and commercial information currently available. Reinitiation of formal Section 7 consultation is not required unless new information reveals effects of the action that may affect the Concho water snake in a manner not considered, if the action is modified in a manner not considered in this opinion, or new species are listed that may be affected by the action. Failure to comply with reasonable and prudent alternatives will nullify the incidental take clause, and thus any project activities will constitute violations of Sections 7 and 9 of the Act.

If habitat creation and improvement measures set forth in the Reasonable and Prudent Alternatives section of this document are successfully completed and occupied by Concho water snakes, a maximum total of 2,629,449 ft² WUA of juvenile foraging habitat will be created (Table 1). The total gain represents a recovery of 161 percent over the total losses of 1,637,308 ft² WUA to the Stacy project, and will increase existing habitat from current 6,311,788 ft² WUA to 7,203,204 ft² WUA. However, the alternatives include many experimental techniques, and the probabilities of success for the alternatives range from 0.05 to 0.50 (see attached Risk Analysis). Therefore, to ensure a nonjeopardy condition and avoid an adverse modification of critical habitat using alternatives whose success will not be known until following project completion, a significantly larger amount of habitat must be created or restored than is lost to the project. Therefore, reasonable and prudent alternatives must be agreed to and carried out to allow for success uncertainties. The alternatives set forth in this document will remove the likelihood of jeopardy from construction and operation of the Stacy project.

As required by law when a jeopardy biological opinion is issued, the Federal agency shall notify the Service of its final decision on the action receiving that opinion. We appreciate working with the Corps and CRMWD in developing this document. Thank you for your interest in conserving endangered species.

Sincerely yours,


Regional Director

TABLE 1. Losses and net gains of Concho water snake juvenile foraging habitat in ft² weighted useable area (WUA) with construction of Stacy Reservoir and implementation of alternatives.¹

	<u>Total Before Stacy</u>	<u>Gain</u>	<u>Loss</u>	<u>Total after Stacy and Alternatives</u>
Upper Colorado River (Robert Lee Dam to Bellinger) (57 mi)	1,028,878	+ 349,922	- 100,729**	1,278,071
Stacy Reservoir (46 mi)	1,450,550	+ 33,750*	-1,450,550	33,750
Colorado River (Stacy Dam to Winchell) (55 mi)	2,806,900	0	-186,798	2,620,142
Colorado River (Winchell to Pecan Bayou) (49 mi)	756,800	+2,285,777	0	3,002,577
Concho River (61 mi)	268,660	+ 0	0	268,660
Totals (290 mi)	6,311,788	+2,639,449	-1,738,037	7,203,204

*Phased project, over 12 years.

**Losses result from requested minimum flows.

¹Computed from typical water year (1970-1985)

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Testimony of
William E. Evans
Assistant Administrator for Fisheries
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Before the
Subcommittee on Fisheries and Wildlife
Conservation and the Environment
Committee on Merchant Marine and Fisheries

House of Representatives

March 17, 1987

Mr. Chairman and Members of the Subcommittee:

I appreciate this opportunity to inform you of the activities of the Department of Commerce under the Endangered Species Act of 1973 and to offer our views on its reauthorization. This Act is vital to the conservation of species of fish, wildlife and plants that are endangered or threatened with extinction.

The authorizations for appropriations under Section 15 of the Act have expired and should be reauthorized to provide essential legislative support for continuation of important conservation programs. The Department of Commerce recommends authorization of appropriations at a level of \$2,275,000 for fiscal year 1988 and such sums as necessary for fiscal years 1989 through 1991.

Over the past years, a number of amendments to the Act have been made to allow adequate flexibility for resolving conflicts while preserving the original intent of the Act--species

conservation. Although the Act continues to be the subject of controversy and discussion, it is, for the most part, accomplishing its purpose.

The National Marine Fisheries Service (NMFS) of the National Oceanic and Atmospheric Administration (NOAA) is charged with conserving, protecting, and managing marine species of fish, turtles, seals, porpoises, and whales which are listed as threatened or endangered. Our efforts are focused on three major program areas--listing, recovery and consultation. I would now like to discuss our progress in these areas.

LISTINGS

The listing process is the critical step in implementing the provisions of the Endangered Species Act because it sets in motion consultation and recovery. The Act allows interested persons to petition to add or remove species from the list of endangered and threatened species. If the petition presents substantial information indicating that the proposed action may be warranted, the agency reviews the status of the species to determine whether a change in listing should be made.

In December 1986, NMFS received a petition to list the Chinese river dolphin as an endangered species. The petition contained substantial information and we have initiated a review of the status of this species to determine whether it should be listed. A decision will be made by December.

Last November we participated in a workshop on the biology and conservation of river dolphins held in China. From the information presented at this workshop, we believe that other river dolphins also may warrant listing under the Act. Therefore, we are reviewing the status of the Ganges River, the Indus River, the Amazon River and the LaPlata River dolphins.

RECOVERY

The ultimate goal of all activities under the Act is to restore listed species and populations to the point where protective measures are no longer necessary for the species to be a self-sustaining part of its ecosystem. Some species are in such critical condition that the immediate goal may be to prevent their extinction.

Development of Recovery Plans

Recovery efforts must not only involve NMFS and the U.S. Fish and Wildlife Service, but must include a coordinated effort by other Federal agencies, State and local governments, private industry, and environmental organizations. The development and implementation of a recovery plan provides a means to combine the programs and expertise of these Federal, State, local and private organizations and individuals into effective and efficient recovery efforts. These efforts should improve the status of the species and eventually lead to delisting. In addition to the recovery plans developed for sea turtles and the Hawaiian monk seal, NMFS is developing national recovery plans for the humpback

whale and right whale. I will be appointing recovery teams for these species to provide technical advice and recommendations concerning the plan and its priorities and to assist in implementation.

IMPLEMENTATION OF RECOVERY PLANS

Hawaiian Monk Seal

The recovery plan for the Hawaiian monk seal identifies problems and limiting factors contributing to the status of the species, identifies information needs, and recommends recovery actions that NMFS and other agencies and organizations can undertake. We are taking several actions under this plan. For example, we are working with the U.S. Fish and Wildlife Service, the Department of the Navy, and the U.S. Coast Guard to control human activity in the vicinity of monk seal habitat in an effort to reduce disturbance of the seals. As part of our head-start program at Kure Atoll we are temporarily maintaining female pups, which has increased their first year survival rate from 10 to 90 percent. Similar initiatives soon will be undertaken for adult female seals.

Critical habitat for this species has been designated and we are expanding our habitat use studies. This year we will study monk seal foraging behavior at French Frigate Shoals, the only location where the monk seal population appears to be limited by the availability of food. This and other available information and the advice from the recovery team will be evaluated to

determine if additional measures are required for the conservation of this species. Although census data from the past four to six years have indicated that throughout the Northwest Hawaiian Islands the total number of seals has stabilized, there is insufficient information to determine if this trend will continue.

Sea Turtles

When the green and loggerhead sea turtles were listed in 1978, the incidental take of these species in shrimp trawls was identified as a problem. The recovery plan for sea turtles identifies this incidental take as a major source of mortality for these species as well as the endangered Kemp's ridley turtle.

We estimate that more than 11,000 endangered and threatened sea turtles die in shrimp trawls each year. In 1981 NMFS developed gear, known as the TED, that reduced the incidental catch of sea turtles in shrimp trawls by 97 per cent. As far as we can tell this gear does not reduce the shrimp catch. Since that time we have been encouraging shrimpers to voluntarily use the TED. Our efforts have not been successful. Of the more than 15,000 shrimp trawlers, at most 300-400 are using TEDs.

At a meeting with representatives of the shrimp industry and the environmental community in August 1986, Under Secretary Calio presented a draft proposed rule that would require the use of TEDs in selected areas. Representatives of both sides expressed concern over this proposal and a desire to seek an

alternative solution for conserving sea turtles. The Under Secretary invited these groups to develop a solution that would be supported by both industry and the environmental community and would allow NMFS to meet its responsibility under the Act.

After a series of meetings an agreement on an alternative solution was reached. We believe that this proposed solution will provide adequate protection for sea turtles and yet not have significant adverse economic effects to the shrimp industry. The agreement calls for a three-phased approach to require shrimp trawlers to use TEDs in the most critical sea turtle areas of the U.S. Gulf of Mexico and the U.S. South Atlantic. These requirements would begin in certain areas July 15, 1987, provided sufficient TEDs are available, and will be expanded through 1990. At that time the effectiveness of the regulations will be reviewed. Additional steps then may be taken to require that TEDs be used during at least 80% of the shrimping effort in the southeast U.S.

Recently NMFS published a proposed rule based on this agreement. As part of the rulemaking process, we have scheduled 13 public hearings. These hearings are being held in North Carolina, South Carolina, Georgia, Florida, Alabama, Texas, Louisiana and Washington D.C. I have provided for the record a copy of the agreement reached between the shrimping industry and the environmental community, the Draft Supplement to the Final Environmental Impact Statement and the proposed rule.

CONSULTATION

Section 7 of the Act requires all Federal agencies, in consultation with the Secretaries of the Interior and Commerce, to insure that their actions are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species.

Federal agency authority and responsibility under Section 7 have remained intact from the 1973 Act; however, amendments to the Act have modified the consultation requirements. Many of these changes were designed to improve interagency cooperation by streamlining the consultation process. In June 1986, regulations implementing these changes were published jointly with the U.S. Fish and Wildlife Service. A seminar will be conducted in the Washington area later this month (March 19) to familiarize Federal agencies with the changes in the Section 7 consultation process. Similar seminars will be conducted in Regional Offices.

The consultation process has worked well for Federal actions affecting listed marine species. The NMFS has encouraged Federal agencies to initiate consultation during the planning stages of their activities. This approach has allowed us to assist Federal agencies in planning their activities to avoid adverse impacts to listed species. As a result, the majority of the consultations are conducted informally and do not require preparation of biological opinions.

FUTURE ACTIVITIES

Enhanced Cooperative Programs with Coastal States

Most of the species under the NMFS's jurisdiction have broad geographic ranges spanning several States. We soon will be exploring with coastal States their interest in developing cooperative management plans and programs for endangered and threatened marine species. I believe that such agreements would greatly enhance recovery efforts for species using coastal habitats.

Guidelines for Recovery Efforts

We will be developing guidelines to focus the NMFS' recovery resources in areas of greatest need and where maximum benefits will be derived for listed species under our jurisdiction.

Marine Species Reviews

The NMFS will develop a mechanism to systematically review marine species that may warrant listing under the Act.

Incidental Take of Listed Marine Mammals

In November 1986, the Marine Mammal Protection Act and Endangered Species Act were amended to provide for the take of listed marine mammals incidental to authorized activities other than commercial fishing. We are working with the Fish and Wildlife Service to develop regulations implementing this amendment.

TECHNICAL AMENDMENT

Under the 1982 Amendments to the Act, permits can be issued to allow taking endangered species incidental to otherwise lawful activities provided that a conservation plan is implemented. Due to what I believe was an oversight in the 1982 Amendments, these permits can be issued to cover only activities within the U.S. or its territorial sea, and not for activities outside the 3-mile limit. We therefore ask for your clarification and, if appropriate, a technical amendment to provide authority for issuing incidental take permits within the U.S. Exclusive Economic Zone. This would assist in our efforts to collect data on the incidental taking of sea turtles associated with fishing and other activities, which now are not reported.

SUMMARY

As I stated earlier the Act has been amended to provide the flexibility to adequately resolve conflicts between listed marine species and various marine user groups. Now we need to put our heads and efforts together to make it work for everyone.

Other than the technical change just mentioned, I believe that no amendments are required at this time. I will be pleased to answer any questions you have.

STATEMENT OF DAVID C. O'NEAL, DEPUTY DIRECTOR, BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR, BEFORE THE SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION AND THE ENVIRONMENT, COMMITTEE ON MERCHANT MARINE AND FISHERIES, UNITED STATES HOUSE OF REPRESENTATIVES, ON THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT.

I appreciate the opportunity to appear before the Subcommittee today to respond to the questions of interest sent to us concerning the Endangered Species Act.

Section 7(a)(1) of the Endangered Species Act directs Federal agencies to utilize their authorities in furtherance of the purposes of the Act by carrying out programs for the conservation of the species it protects. The Threatened and Endangered Species Program of the Bureau of Land Management involves several major elements including developing and implementing plans to improve habitat consistent with recovery plan objectives; monitoring and evaluating recovery efforts; inventorying habitat and developing data bases on the occurrence of threatened and endangered species on the public lands.

Section 7(a)(2) of the Endangered Species Act requires Federal agencies to insure that actions of the agency are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of the habitat of such species which the Secretary determines to be critical. In implementing this provision BLM has developed a screening process to determine whether actions proposed to be taken on the public lands, either Bureau initiated or outside initiated, may affect listed species, and if so, consults with the Fish and Wildlife Service. Our

Our objectives are to ensure that any action proposed is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. While the technical work within the Bureau, including contacts with the Fish and Wildlife Service, are performed by BLM wildlife specialists, the cost of this effort is charged to the funds of the action-driving program and not to the threatened and endangered species program funds, unless the wildlife program is the initiator.

BLM's funding dedicated specifically for direct threatened and endangered activities is \$3,932,000. Of this amount, about 38 percent is used for implementing recovery plans for listed threatened and endangered species. Twenty-eight percent is used for monitoring ongoing management and evaluating recovery efforts, 21 percent for updating inventory data bases, 8 percent for developing plans, and 5 percent for some limited research. Our emphasis will continue to be on recovery actions needed for delisting.

Currently 73 recovery plans have been approved on plants and animals which occur on lands under BLM jurisdiction. In addition, 12 new plans are being written. The Bureau's role in these plans essentially involves habitat management and maintenance. Some of these plans require significant actions, including eliminating or modifying other program activities, habitat protection and various forms of habitat improvement, such as vegetative management and water development. Other plans require minimal action, by comparison, and may only require continual monitoring of habitat conditions and species occurrence on BLM lands.

There are several other features of the Bureau's endangered species program which we would like to mention.

In 1976 the Bureau distributed to all its field offices policy guidance for Threatened and Endangered Wildlife. This was revised in 1980 to apply equally to threatened and endangered plants.

The Bureau provides continuing training to its wildlife biologists on their responsibilities under the Endangered Species Act. The training is conducted at BLM's Phoenix training center and has recently been expanded to a full one-week training course.

We are also developing a strategic plan for wildlife, entitled "Fish and Wildlife 2000." This plan will contain management goals and objectives for threatened, endangered, and candidate species.

We are revising our Manual on this subject to assure field personnel are fully apprised of program goals, policies and objectives.

In these revisions we are giving increased attention to rare plants. As a first step we are initiating a review to develop a clearer understanding of the program and to identify what directives are needed.

With regard to candidate species, the Bureau's policy is to continue multiple use, but to manage activities involving these species in a manner which minimizes impacts. Our objective is to assure, through wise land management practices, the need for listing species in the future will be obviated.

We advise BLM field personnel regularly of the Fish and Wildlife Service lists of candidate species. This is accomplished through distribution of the revisions which are published in the Federal Register. Examples of specific lists distributed include:

- o Vertebrate species list published in 1985
- o Invertebrate species list published in 1984.
- o Plant species list published in 1980 and updated in 1983 and 1985.

Each BLM field office conducts the necessary evaluations to determine which of these species occur on BLM lands and to what extent they may be affected by BLM actions. Inventory and monitoring are the principal tools used to make these evaluations.

Section 202(c)(3) of the Federal Land Policy and Management Act of 1976 directs the Secretary of the Interior, when developing and revising land use plans, to give priority to the designation and protection of areas of critical environmental concern, generally referred to as ACEC's. We have responded to this mandate under FLPMA to protect a number of key habitats. In fact, BLM has designated some 206 ACEC's encompassing some 1.8 million acres in 9 States.

The term ACEC is merely a designation for an area which has been determined through land use planning to require special management. The management prescription for the area is tailored to the unique circumstances of each situation. ACEC designation is only one of many tools available to all our field managers. Field personnel are in the best position to determine which management practices should be used to protect habitat of candidate species.

With regard to proposals to require the monitoring of candidate species, it should be noted that the Bureau already has ongoing monitoring efforts for some candidate species. These include, among others, the desert tortoise, northern spotted owl, ferruginous hawk, and several species of plants. Currently, there are some 620 candidate plant species and 250 candidate animal species on BLM administered lands. We have launched extensive monitoring programs for our various natural resource activities and will continue to emphasize monitoring. Currently, we have sufficient resources to accomplish the priority needs in monitoring.

The Bureau has taken two principal steps to address threats to wildlife resources within or near National Parks. The most significant is the implementation of habitat management plans on adjoining BLM lands where significant fish or wildlife resources occur. In areas where the fish or wildlife resources are not significant enough to warrant preparation of a Habitat Management Plan, BLM incorporates fish and wildlife habitat objectives in activity plans for other programs such as recreation, forestry, and livestock grazing.

The second principal step has been the completion of a Memorandum of Understanding between BLM and the National Park Service. This Memorandum of Understanding, signed last January, provides for closer communication and cooperation in areas where BLM and NPS lands adjoin. This enables both agencies to work in partnership to manage habitats and lands to achieve the resource management objectives of both agencies. The Memorandum of Understanding establishes a framework to foster early identification of potential conflicts in the agencies' plans, programs, and activities to avoid conflicts wherever possible and to facilitate resolution of conflicts that may develop.

Reflecting the operational organization of the agencies, the Memorandum of Understanding is designed to trigger a series of arrangements and efforts at the local field level which should contribute greatly to alleviating the concerns identified in the study entitled "Mammalian Richness, Colonization and Extinction in Western North American National Parks". Field officials have been directed to formalize such arrangements. It should be noted that there is a difference in habitat management philosophy between the two agencies. Generally speaking, BLM's philosophy provides for a more active form of management to maintain vegetative conditions suitable to species that are to be emphasized in management. The Park Service, on the other hand, practices a more passive form of management and essentially allows nature to take its course. BLM has adequate authority under the Federal Land Policy and Management Act and the Sikes Act to address threats to wildlife resources in the vicinity of National Parks and that authority is effectively used.

It also important to note that BLM meets on a regular basis with the Fish and Wildlife Service to coordinate our actions and discuss current developments on issues of mutual concern. In addition the Bureau maintains a close formal relationship with State fish and wildlife agencies dealing with the full range of fish and wildlife program activities on BLM-administered land, including matters related to threatened and endangered species.

I will be pleased to respond to any questions you may have.

STATEMENT OF
GEORGE M. LEONARD, ASSOCIATE CHIEF
FOREST SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

Before the
Subcommittee on Fisheries and Wildlife Conservation and the Environment
Committee on Merchant Marine and Fisheries
United States House of Representatives

March 17, 1987

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

Thank you for this opportunity to present an overview of Forest Service endangered species programs and to address the specific questions raised by the Subcommittee.

We are proud of our management programs to maintain or enhance the habitats for threatened and endangered species. Wildlife habitat management was of major importance on the National Forest System long before the Endangered Species Act of 1973. However, the Act provides important authorities and emphasis to this aspect of our wildlife habitat program. Species that we were protecting before the Act include the bald eagle, the California condor, and the Kirtland's warbler.

Before addressing the specific questions of the Subcommittee, I would like to briefly discuss the history and current status of our endangered species program.

As you know, the Endangered Species Act requires that the Forest Service take no action to jeopardize a threatened or endangered species and that we take positive action toward the recovery of threatened and endangered species. Not only do we have an active management program, but our research and administrative studies continue to provide information and technology to improve our ability to manage and recover threatened and endangered species. Since enactment of the Endangered Species Act, the Forest Service has initiated and carried out research on some 20 threatened or endangered species.

Currently, we are conducting habitat research on the red-cockaded woodpecker, the Puerto Rican parrot, the grizzly bear, the woodland caribou, the eastern timber wolf, the Kirtland's warbler, the California condor, six species of Hawaiian birds, and bald eagles along the Skagit River. Even if individuals are removed from the wild, as with the California condor, we continue to conduct research to identify characteristics of suitable habitat. In addition, we have numerous past and ongoing administrative studies dealing with threatened, endangered, and sensitive plants and animals throughout the National Forests.

Emphasis within our habitat improvement funding for threatened and endangered species is being given to bald eagles, peregrine falcons, and grizzly bears. A few other noteworthy species receiving management funding and emphasis are the Puerto Rican parrot, red-cockaded woodpecker, woodland caribou, spotted owl, Gila trout, Kirtland's warbler, Lahontan cutthroat trout, Oregon silverspot butterfly, and selected plant species. Our implementation of the Endangered Species Act is coordinated with the

requirements of the National Forest Management Act of 1976 (NFMA). The implementing regulations for NFMA require the Forest Service to manage fish and wildlife habitats so as to maintain viable populations of existing native and desired non-native vertebrate species. A viable population has the estimated numbers and distribution of reproductive individuals needed to ensure its continued existence. In most cases, we manage to provide habitat for a population level much higher than the minimal "viable" number.

For the convenience of the Subcommittee, I would like to summarize our response to your written questions. A more detailed response is provided as part of my written statement.

Section 7 of the Endangered Species Act directs all Federal agencies to utilize their authorities by carrying out programs for the conservation of listed species. The Forest Service manages essential habitats of all listed species within the National Forest System to help assure their protection. In addition, the Forest Service has participated in, or is participating in, the development of recovery plans. Currently, emphasis is being placed on the management of the habitats of 129 threatened or endangered species that are found within the National Forest System. A total of 926 species are listed.

The Committee expressed considerable interest in the category of species often referred to as "candidate species." Through the authority and intent of several laws, including the National Forest Management Act and the Endangered Species Act, we have developed a strong sensitive species

protection and management program. All of our field offices are kept apprised of this program through our Forest Service Manual, and Forest Service officials routinely review implementation to assure compliance. The Secretary of Agriculture's policy includes direction to (1) manage habitats for all existing native and desired non-native plants, fish, and wildlife species in order to maintain viable populations of such species; (2) conduct activities and programs to assist in the identification and recovery of threatened and endangered plant and animal species; and (3) avoid actions which may cause a species to become threatened or endangered.

Although the Endangered Species Act only covers those species that are listed, the Forest Service currently monitors candidate species through our sensitive species programs with emphasis on areas where planned activities may impact such species. In addition, each Forest plan contains a section on monitoring fish, wildlife, and plant species. As these plans are implemented, our monitoring efforts will be increased. We are concerned that populations might not thrive in small islands of habitat as sometimes happens when small reserves are set aside. Most National Forest System lands occur in large blocks, and we have a long history of managing these lands to protect all resources. The habitat diversity available under multiple use management within the National Forest System provides suitable habitat for most of the mammal species identified in the study entitled "Mammalian Richness, Colonization and Extinction in Western North American National Parks." Examples of

thriving species include spotted skunks, raccoons, red fox, lynx, and badgers; other examples are listed in the written statement. Our management plans will continue to emphasize the protection of high priority species such as the grizzly bear, gray wolf, and black-footed ferret.

Thank you for this opportunity to present some of my views and perspectives concerning the threatened, endangered, and sensitive species programs of the Forest Service.

I would be happy to answer your questions or provide any additional information you may desire.

USDA FOREST SERVICE
 Response to Questions from the
 Subcommittee on Fisheries and Wildlife Conservation and the Environment
 House Committee on Merchant Marine and Fisheries
 Regarding the March 17, 1987, hearing on the Endangered Species Act

1. Section 7(a)(1) of the Act directs all federal agencies to "utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of" the species it protects. The Subcommittee will be interested in how the Forest Service has implemented this directive and will seek a specific description of programs planned or currently underway. We will also seek detailed information concerning the manner in which the Forest Service has communicated this legislative directive to its field officials.

ANSWER: The Forest Service has implemented programs to protect all listed species on National Forest System lands and conducts informal and formal consultations on all plans and projects funded or permitted by the Forest Service that may affect a listed species. The Forest Service manages essential habitats of all listed species to help ensure protection. In addition, the Forest Service has and is incorporating recovery plan goals into the Forest. Species needing special protection to prevent the need for listing are identified as Sensitive Species, and special protection is provided through Regional Guide or Forest Plan standards.

2. Since 1980, the U.S. Fish and Wildlife Service has identified a large backlog of "candidate species" that appear to meet the biological criteria for listing under the Act, but that will very likely not be listed for many years because of the Service's limited resources.

a. What, if any, policies has the Forest Service adopted with respect to activities it authorizes or carries out that affect such candidate species?

ANSWER: The Fish and Wildlife Service (FWS) "candidate species" program is closely associated with the Forest Service Sensitive Species Program. Priorities are established at a Regional level and coordinated with all cooperators and interested parties. Proposed candidate species and high priority FWS category 1 species receive nearly the same protection and management on the National Forest System as federally listed species.

b. How, if at all, does the Forest Service ensure that its field personnel are kept apprised of the Service's lists of candidate species and of their possible presence on lands under Forest Service jurisdiction?

ANSWER: All field offices receive copies of the Federal Register containing species lists and information. Further, the Forest Service maintains a current list of the species in Chapter 2600 of the Forest Service Manual. Regional protection assignments are made in the Forest

Service Manual which is maintained in all offices. Local contacts and coordination meetings with State Fish and Wildlife agencies, the Fish and Wildlife Service, and others interested in rare and endangered species are routinely scheduled by Forest Service officials. Inventory and biological information for Regional Sensitive species is also shared with field offices of other agencies in a similar fashion.

c. The Subcommittee is aware that the Forest Service maintains a program of designating a system of "Research Natural Areas" and "Special Interest Areas." To what extent has the Forest Service activity utilized this program to designate such areas in order to protect candidate species? If and where existing areas have been designated to protect candidate or listed species, has the Forest Service undertaken any comprehensive effort to determine whether the protection being afforded under such designations has been effective and adequate?

ANSWER: The Forest Service considers candidate species when selecting Research Natural Areas (RNA's) or Special Interest Area (SIA's). The effectiveness of RNA's or SIA's for protection of candidate species is part of the full implementation and monitoring of Forest Plans.

The Forest Service has used these programs to protect rare, endangered, threatened, and sensitive (RET&S) species that appear on either national or State lists. The programs are not set up specifically for this purpose, but their scope is broad enough to achieve this end. Research Natural Areas of Forest Service Region 6 (Washington and Oregon) serves as an example by providing the most recent and comprehensive published records of research from these areas. This information is documented in Research Natural Areas in Oregon and Washington: Past and Current Research and Related Literature, published as General Technical Report PMW-197 in November 1986. Cooperation among Federal agencies involved in the Research Natural Area program is well developed in this Region. In Region 6, 12 RET&S species are found on 10 Forest Service Research Natural Areas, 23 species are found on 14 Bureau of Land Management Research Natural Areas, 4 species are on three National Park Service Research Natural Areas, and 1 each is found on Fish and Wildlife Service and a Department of Energy Research Natural Area. Of the 39 established and 23 proposed Forest Service Research Natural Areas on which research has been conducted in Region 6, one Research Natural Area (Thompson Clover RNA) was set up specifically to protect a single RET&S species, *Trifolium thompsonii*, and one (Limpy Rock RNA) was set up because it contained a wide array of species several of which were believed to be on the National or State lists, including *Kalmiopsis leachiana* v. *nova*.

Many other species throughout the National Forest System benefit from the protection afforded by designating Research Natural Areas and Special Interest Areas, and the Forest Service Manual (FSM) direction governing use of these areas.

3. During the 99th Congress, this Subcommittee recommended, and the full House agreed, that the Endangered Species Act be amended to require the monitoring of candidate species to ensure that they do not decline further or disappear before they can be listed under the Act. How can the Forest Service assist in this monitoring effort for candidate species that occur on lands under FS jurisdiction? Would the Forest Service assistance in this effort require additional resources and, if so, to what extent?

ANSWER: The Forest Service sets population viability goals for candidate species (Sensitive Species) and monitors habitat and population trends in Forest plans. Several candidate species have special monitoring programs currently underway. Current budgets limit activities to the highest priority species or species projects that might be affected by resource development. There may be an opportunity to remove many species from the candidate list with additional inventory and analysis of habitats and populations.

4. A recent study entitled "Mammalian Richness, Colonization and Extinction in Western North American National Parks" reports that many species of mammals are disappearing from North America's national parks. The study attributes these local extinctions within our parks to habitat changes on adjacent and nearby lands that isolate the parks as "island ecosystems" unable to maintain viable populations of species that require larger habitat areas or closer proximity to similar habitat areas. Most of the parks where these local extinctions have occurred are adjacent to or near Forest Service or other federal lands subject to multiple use management. What steps has the Forest Service considered taking to address this threat to wildlife resources within or near our National Parks? Does the Forest Service have adequate authority under the Sikes Act to address this problem? If so, is that authority being effectively used?

ANSWER: - First, the cited study conducted by the University of Michigan showed that the only species that have disappeared from both the National Parks and the National Forests are the jaguar and black-footed ferret. The grizzly bear and gray wolf are missing from most Parks and most Forests they originally inhabited, but both still occur on some Parks and some Forests. Bison are present in a few Parks and on a few Forests. Caribou are present on one Forest but no Parks. The extirpation of these species from most Parks and Forests is directly attributable to predator control, rodent control, market hunting, and illegal killing. These activities occurred historically in areas now designated as Parks as well in what were to become National Forests. Of the remaining 34 species studied, 20 have disappeared from one or more of the National Parks they once inhabited. Preliminary checks of Forest Service data bases indicate that all 20 species plus the 14 others that still occur on their original Parks are still viable species on the National Forests and other public lands adjacent to the Parks in question. Many of the species listed as extinct from some National Parks, but still viable on National Forests, appear to be more favored by the habitat diversity that results from

multiple use management, e.g., spotted skunk, striped skunk, black-tailed jackrabbit, white-tailed jackrabbit, raccoon, red fox, lynx, badger, brush rabbit, pronghorn, elk, and ringtail. Others occur on the Forests because their natural habitats are better encompassed by forest boundaries; e.g., pika, river otter, mink, ermine, fisher, wolverine, Nuttall's cottontail, and mountain sheep. Second, the Forest Service manages habitats and human activities to maintain the full diversity of all native plant and animal species under authority of the Endangered Species Act of 1973 and the National Forest Management Act of 1976. This habitat management keeps source populations of all species viable so that they will have an ability to reoccupy National Park habitats if those habitats become suitable for the particular species. In addition to maintaining the full diversity of mammals that could reinhabit Parks, the Forest Service protects the habitats of threatened, endangered, and candidate species through both the recovery plan process and our own management standards. We cooperate and coordinate our efforts with Park managers and often conduct management and protection activities together. Third, in addition to ESA, and NFMA, the Sikes Act provides for coordination of Forest Service habitat goals with State agency plans. This authority is adequate and fully used through Memoranda of Understanding with 42 States.

STATEMENT OF
ENVIRONMENTAL DEFENSE FUND
WORLD WILDLIFE FUND-U.S.
NATIONAL AUDUBON SOCIETY
NATURAL RESOURCES DEFENSE COUNCIL
THE WILDERNESS SOCIETY
ASSOCIATION OF SYSTEMATICS COLLECTIONS
AMERICAN CETACEAN SOCIETY
CENTER FOR ENVIRONMENTAL EDUCATION
GREENPEACE USA
HUMANE SOCIETY OF THE UNITED STATES
ANIMAL PROTECTION INSTITUTE
INTERNATIONAL FUND FOR ANIMAL WELFARE
INTERNATIONAL WILDLIFE COALITION and
INTERNATIONAL PRIMATE PROTECTION LEAGUE

BEFORE THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION
AND THE ENVIRONMENT

OF THE
HOUSE COMMITTEE ON MERCHANT MARINE AND FISHERIES

CONCERNING
THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT

MARCH 17, 1987

Presented By
Michael J. Bean
Environmental Defense Fund

Introduction: The Need for a Vigorous Endangered Species

Program

This subcommittee has heard many times before about the urgency of the problem of endangered wildlife and the importance of a vigorous program to rescue our wildlife from the threat of extinction. The refrain about the role of often obscure species in discoveries of major value to medicine, agriculture, industry and science has been repeated so often by so many distinguished scientists in this very room that one could scarcely add more today.

There is, however, much that is new in the five years since Congress last reauthorized the Endangered Species Act, some of it encouraging and some of it deeply discouraging. Five years is hardly the blink of an eye in the evolutionary life of most species. Yet, in that short period, we have witnessed the following. A continued decline in the wild population of California condors necessitated a last-ditch effort to bring the few remaining wild birds into captivity for an uncertain effort at captive breeding. Today, only one wild bird remains; when it is captured, the condor will be extinct in the wild. A similarly dramatic decline in the only known population of black-footed ferrets led to a similar emergency rescue of the handful of surviving ferrets for a still unsuccessful captive breeding effort. One ferret apparently eluded the captors; when it passes

from the wild, so too will the species. The Guam rail, a flightless bird on our island of Guam, met the same fate. It too has gone extinct in the wild in the space of the past half decade. For the Palos Verdes blue butterfly in California, not even the faint hope of captive breeding can sustain it; the last known population of this inconspicuous creature was destroyed only a few years ago; it is now extinct. The Kemp's ridley sea turtle, whose nesting population had already been reduced some 99 percent since the late 1940's, continued its steady slide toward extinction as the remnant nesting population declined still further and American shrimp trawlers took a heavy toll of the immature turtles that are the only hope for rebuilding that nesting population.

These are a few dramatic examples. They represent thousands of other, less well known, species living in the same endangered habitats. The more obscure species are precisely the ones most likely to have economic importance that has gone unrecognized. For example, the loss of major free-flowing rivers has threatened dozens of species, including many endemic American freshwater mussels whose shells are exported to Japan for the button industry.

The list of major setbacks we have suffered in the past five years could go on, but to do so might obscure the more important lesson from that same period. That lesson is that the road to

extinction can be reversed. The bald eagle and peregrine falcon have continued their steady recoveries throughout this period. So too has the brown pelican, which in the southeastern United States has been removed from the Act's protected list. The wintering flock of whooping cranes in Texas surpassed 100 this year, the first time it has done so since early in this century. The current population of Aleutian Canada geese may also be at a new high since its listing. The red wolf, once extinct in the wild, is about to be reintroduced. New populations of other species, among them the Gila trout and thick-billed parrot, have been established. The alligator has substantially recovered, not just in Louisiana, but throughout its range. These and other success stories demonstrate that, with a vigorous endangered species program, it is within our power to bring about positive results. The setbacks, on the other hand, demonstrate that the present program with the present level of resources is not enough. The remainder of this testimony addresses what more is needed.

Enlisting the Cooperation of the States through Section 6:
A Key to Recovery

When Congress passed the Endangered Species Act in 1973, it declared that encouraging the states, through federal financial assistance, to develop and maintain conservation programs for endangered species was "a key to meeting the Nation's international commitments and to better safeguarding ... the

Nation's heritage in fish, wildlife, and plants." The development of cooperative programs at the state level remains a key to the success of this Act today. Many of the Act's success stories have come about as a result of cooperative state and federal endeavors made possible by the sharing of costs under Section 6 of the Act. To be eligible to participate in the Section 6 program, just about every state has entered into a cooperative agreement with the Fish and Wildlife Service; about half have both an animal agreement and a plant agreement.

If the Act's success stories are still limited, however, a large part of the explanation is that the Section 6 program has also been quite limited. The sums made available for carrying the federal share of worthy conservation projects have been neither great nor predictable. As the number of states eligible to participate in the Section 6 program has increased, and as the number of listed species that might benefit from that program has also increased, the sums made available under Section 6 have rarely even held constant. The Section 6 pie is so small, and being sliced in so many pieces, that many states -- and fully two-thirds of all listed species in the United States -- currently receive not a cent of benefit from it. The amount of money currently appropriated for matching grants to the states under Section 6 is roughly the same as it was in 1977. Yet, there are four times as many state cooperative agreements eligible for Section 6 support today as there were in 1977 and

twice as many listed species.

The inadequacies of the current level of the Section 6 program are evident from a consideration of the situation confronting virtually every state:

California -- In fiscal year 1986, the federal government was able to furnish only about a third of the matching financial support requested of it for worthy conservation projects developed by California. Since 1981, the federal government's support has declined steadily; the funds it provided in 1986 were only about a quarter of what it annually provided during the period 1978 through 1981. Fewer than a fifth of California's listed species received any benefit at all from Section 6 in fiscal year 1986. Indeed, only two of its 28 listed plants benefitted from Section 6 funding.

Florida -- In fiscal year 1986, the federal government was unable to furnish the matching financial support requested of it for worthy conservation projects developed by Florida. In fact, though more than 40 listed species occur in Florida, only eight of these benefitted from Section 6 expenditures in 1986. The total amount of Section 6 funding available to Florida in 1986 (half of which went for only one species, the Florida panther) was only about two-thirds the level of support in 1980 and 1981, when far fewer Florida species were listed.

New Jersey -- Since 1982, the federal government's support of New Jersey's endangered species program through Section 6 has averaged only \$10,000 per year. In fiscal year 1978, by contrast, over \$700,000 in Section 6 money was made available to New Jersey. The \$10,000 made available last year provided nominal support for only two of the state's eight listed species.

New York -- Since 1981, the federal government's support of New York's endangered species program through Section 6 has dropped dramatically. The \$36,000 made available to New York last year represented less than a tenth of the amount annually made available to New York during the period 1978 through 1981. Prominent endangered species in New York, like the bald eagle and the peregrine falcon, did not receive any benefit at all from the drastically reduced levels of Section 6 support last year.

Washington -- During the last two years, the federal government has been able to furnish less than a fifth of the matching financial support requested of it for worthy conservation projects developed by the State of Washington. Moreover, the amount of Section 6 support for Washington during the past five years has been only a third of that provided during the previous five years, despite the addition of new species to the endangered species list in Washington.

There is an even more insidious problem in the Section 6 program than that of unmet, or inadequately met, needs. The level of federal support for Section 6 has been not only small, but entirely unpredictable. The uncertainty whether any money at all will be available for a state's projects in a given year, and the sure recognition that any sums that are available will be small, have continued to turn an increasing number of states away from the Section 6 program altogether. More and more, states are coming to the view that it is not worth their effort to apply for Section 6 funds; the sums involved are too small and the chances of getting them too slight.

The recovery of most endangered species will require a sustained effort over many years. Yet, the sums appropriated under Section 6 have been such a roller-coaster that long-term projects have been effectively discouraged. Some states initially hired staff for such projects, only to have the federal rug pulled from under them, a risk they are now reluctant to run again. It is hardly surprising that state agencies are becoming increasingly reluctant to seek the small and uncertain sums available under section 6. The same state agencies have guaranteed shares under the Pittman-Robertson, Dingell-Johnson, and Wallop-Breaux programs of nearly \$300 million in federal receipts for game and sport fish conservation. As these state-grant programs have bulged, the Section 6 program has become less and less consequential.

The remedies to this situation are two. The first is to increase substantially the level of funding for the Section 6 program. Currently unmet needs justify an immediate increase in the authorization level to \$15 million (still only about 5% of the level of federal grants for game and sport fish conservation). By the fifth year of the proposed reauthorization period, a \$25 million authorization level will likely be needed to keep pace with additional species listings and the expanded state programs that the immediate increase will bring about.

The second key to remedying the deficiencies of the Section 6 program is to put its funding on a secure, predictable basis. The success of the Pittman-Robertson, Dingell-Johnson, and Wallop-Breaux programs is owed to their independence from the roller-coaster ride of annual appropriations. We suggest that the Section 6 program be given a measure of the same independence by earmarking certain related federal revenues exclusively for it. Candidates for such earmarking might include duties on certain imported products, penalties recovered under various federal environmental laws, and possible excise taxes on certain products often associated with the enjoyment of wildlife. We intend to develop a specific proposal of this sort. For now, we want only to persuade the subcommittee of the essentiality of this approach and offer to it our assistance in refining the idea.

Improved Protection for Candidate Species: Avoiding the
Need for Costly, Controversial Measures in the Future

Since 1980, the Fish and Wildlife Service has systematically inventoried plants, vertebrates, and invertebrates in the United States to determine which of them appear to warrant listing as threatened or endangered species. Those for which the Service already has in hand sufficient information to warrant a formal listing proposal -- the so-called "category I candidate species" -- currently number about 960. The Service does not currently have the personnel and other resources to carry out the required listing procedures -- federal register notices, newspaper notices, local hearings, etc. -- for that number of species. Indeed, at the present level of resources available for listing species, the Service manages to complete only about 50 listings annually. Thus, absent some increase in those resources, final listing decisions for the existing backlog of already eligible species will not be completed until well into the next century. Until these species are listed, however, they receive no legal protection under the Endangered Species Act.

This situation creates two serious problems. The most obvious is the risk that some of these species whose conservation might be assured through the protections afforded by the Act will instead be lost before receiving any protection at all under the Act. This is not just a hypothetical possibility; it has already occurred. Several species have gone extinct after being

identified as candidates for future listing but before that listing actually happened. Others may follow if steps to achieve some level of "interim" protection for candidate species are not taken.

The less obvious risk is also serious. It is that many of these candidate species are likely to undergo a further substantial decline in numbers or distribution before they are listed. The list of examples of this character is already quite long and growing. The significance of this fact is that by the time a candidate species is actually listed under the Act, the options for securing its conservation are likely to have been severely narrowed. Relatively inexpensive, non-controversial recovery options that may have been available when the species was more numerous or widespread may no longer be available. Costly, controversial, and high-risk measures may be all that remain. This is surely a compelling response to the suggestion sometimes made that the government should stop adding species to the threatened and endangered lists until it first succeeds with the recovery of those already listed.

We offer three suggestions to remedy this situation. First, this subcommittee should insist that the Service embrace the very modest goal of making final listing decisions on all of the current Category I candidate species by the end of the century. Accomplishing that goal will require an approximate

doubling of the current pace of species listings and a corresponding increase in the resources available for the Service's listing effort.

Second, the subcommittee should again seek to amend the Act to require that the Secretary monitor the status of candidate species to ensure that no significant risk to their well being occurs while they are candidates for listing. The House approved such a provision without controversy in the last Congress (section 1(a) of H.R. 1027). The record of candidate species extinctions and severe depletions is compelling evidence that the existing level of effort to stay abreast of what is happening to candidate species while they remain candidates is inadequate.

Third, other federal agencies must make more effective use of their authorities to assist in the monitoring and protection of candidate species. A major share of the currently identified candidates occur on federally managed lands, particularly those of the Forest Service and the Bureau of Land Management. BLM's authority to designate "areas of critical environmental concern" is ideally suited to protect occurrences of both listed and candidate species, yet with the exception of the California desert and the state of Oregon, that authority has been only sparingly used for such purposes. Similarly, the Forest Service could make expanded use of its authority to

designate special management areas in order to protect candidate and listed species. Both agencies could, and should, integrate candidate species monitoring measures into their periodic wilderness study area inspection programs. Other agencies could also implement their authorities in ways that would more effectively serve the goal of protecting candidate species without sacrificing primary agency missions. For example, the National Park Service's "national natural landmark program" could serve as a very effective device for monitoring and protecting candidate species that occur on non-federal lands.

Wetland-dependent candidate species could be protected through EPA's program to identify in advance special aquatic sites inappropriate for filling under Section 404 of the Clean Water Act. If the Fish and Wildlife Service is given a clear statutory directive to establish a program to monitor the status of candidate species, it will be given the necessary nudge to pursue these and other mechanisms for inter-agency cooperation.

Plants: Protection on Non-Federal Lands and
Modified Enforcement Authority Needed

About a third of the currently listed endangered and threatened species in the United States are plants. This fraction is almost certain to grow, since the great majority of the candidates for future listing are plants. There is increasing evidence, however, that the limited protection the Act affords to listed plants is insufficient. We propose two

carefully focused amendments to increase that protection.

Currently, anyone who captures, kills, or otherwise harms an endangered or threatened animal commits a violation of the Act for which substantial criminal and civil penalties may be imposed. By contrast, anyone can pick, dig up, cut, or destroy a threatened or endangered plant with impunity unless the offense is committed on federal land -- and even then there is no violation of the Act unless the plant is removed from the area of federal jurisdiction. Protection from unscrupulous collectors is simply non-existent anywhere other than on federal lands.

The limited reach of the Endangered Species Act for plants is troublesome precisely because few listed plants occur only on federal lands. Indeed, 44 of the 54 plant species listed since early 1985 occur, in whole or in part, on non-federal lands; more than half of the 38 plants currently proposed for addition to the threatened and endangered lists occur only on non-federal land. Many of these plants occur on lands acquired by non-profit conservation organizations, like the Nature Conservancy, in order to protect the plants. Yet, generally ineffective state trespass laws are often the only deterrent against vandals and unscrupulous collectors plundering the unique biological assets that give these lands their conservation value.

We propose a very limited, carefully focused amendment that will remedy this situation. Our proposed amendment would make it an offense under the Endangered Species Act to remove, cut, dig up, or destroy any endangered plant on any non-federal land area where that activity violates the laws or regulations of any state or where it is committed in the course of a trespass on the area. Our amendment would not change in the slightest any existing legal duty, for we would only make punishable under the Endangered Species Act what is already illegal under state law. The practical effect of our amendment, however, would be to provide a much more effective deterrent to such illegal acts, because the penalties authorized by the Endangered Species Act are more severe than those typically authorized by state trespass or other laws.

Our amendment would also slightly broaden the existing prohibition with respect to plants on federal lands by prohibiting the malicious destruction --i.e., willful vandalism -- of endangered plants on federal lands. While it may seem inconceivable that anyone would direct an act of senseless vandalism against an endangered plant, there have been apparent instances of exactly that, including the apparent cutting of a number of Virginia round-leaf birch seedlings in Virginia. Currently, it is an offense only to remove endangered plants from federal lands. However, vandals can do as much harm to a rare plant species without ever removing it from federal

jurisdiction. Our amendment would provide a means of punishing such acts without affecting in any way the legitimate uses of federal lands.

The above can be accomplished by amending Section 9(a)(2)(B) of the Act to read as follows (with new language underlined):

"(B) remove and reduce to possession any such species from any area under Federal jurisdiction; maliciously damage or destroy any such species on any such area; or remove, cut, dig up, or damage or destroy any such species on any other area in violation of any law or regulation of any state or in the course of any trespass upon such area;

A second amendment that is clearly needed for more effective plant protection would give the Fish and Wildlife Service enforcement authority, concurrent with that of the Agriculture Department's Animal and Plant Health Inspection Service (APHIS), over the importation and exportation of plants protected by the Act or the Convention on International Trade in Endangered Species (CITES). Currently, Section 3(15) of the Act vests that authority exclusively in the Secretary of Agriculture, who has delegated it to APHIS. The resources available to APHIS alone to combat the sizeable and sophisticated illegal international trade in protected plants are inadequate.

Beyond the matter of its limited resources, however, APHIS has shown little inclination to treat its responsibilities under the Act with the same aggressive vigor that it gives to its other

statutory missions. Since 1978, it has referred only three cases for prosecution under the Act; by contrast, the Fish and Wildlife Service since 1981 has referred nearly a thousand cases of suspected violations involving protected wildlife. A few egregious examples illustrate APHIS's inability or unwillingness to do the job required of it. Plants of the genus Cyclamen have been subject to CITES controls for over a decade. The Netherlands has long been reported to be a major conduit for international trade in wild-dug Cyclamen of Turkish origin. In 1984 it exported some 34,000 specimens of this genus to the United States; yet it was not until 1987, and only after an inquiry from the Natural Resources Defense Council, that APHIS began requiring CITES documentation for such shipments. Even now, APHIS inspectors have not been instructed to inspect to determine whether plants claimed to have been artificially propagated appear to have been wild-dug.

Similar enforcement lapses have occurred with respect to many other species, including orchids from the tropics and highly valuable succulents from Madagascar. Tips from plant experts and persons familiar with the trade, even suspicions by APHIS's own inspectors that there were serious irregularities in connection with shipments of these plants, failed to generate any investigative response by the agency. The agency's attitude seems to be that unless it is presented by a third party with conclusive proof of a violation, it will not mount even a minimal

investigation. Perhaps most indicative of the agency's casual indifference to its enforcement responsibilities is that it let a 1984 memorandum of understanding with the Fish and Wildlife Service, whereby the latter helped APHIS with its plant enforcement task, lapse in 1985; despite Justice Department urgings, the agreement has still not been renewed.

To remedy this deficiency, one need only insert the word "also" immediately before the words "means the Secretary of Agriculture" at the end of Section 3(15).

Recovery Plans and Recovery Plan Implementation

The ultimate goal of the Endangered Species Act is to bring about the recovery of the species it protects. To date, there have been a few notable successes in which listed species have recovered to the extent that they could be moved from the endangered list to the less imperiled threatened list or removed altogether from either list. They will likely soon be joined by other species for which progress toward recovery is well under way.

Given that recovery is the Act's ultimate objective, this subcommittee ought to look carefully at the way in which the Services endeavor to bring it about. From the very early years of the Act's implementation, the Fish and Wildlife Service

utilized the device of formal, written "recovery plans" to guide its actions with respect to particular listed species. This device received express congressional approval in the Endangered Species Act amendments of 1978. Beginning in 1981, the Interior Department began investing heavily in the writing of recovery plans; indeed, former Secretary Watt regularly defended against criticism of his implementation of the Act by pointing to the accelerated rate of recovery plan writing during his tenure.

There are now written recovery plans for more than 200 listed species. They provide a basis for some studied observations about the merits of current recovery planning efforts and recommendations for their improvement. The first observation is that one must be careful not to confuse recovery plan writing with recovery plan implementation. Recovery plans are pieces of paper. Like medical prescriptions, they identify what is needed for species to get well. Just having the piece of paper is no guarantee of recovery -- one has to buy the medicine as well.

Recovery plans ought to fairly specific about at least three things: (1) what criteria, when met, will establish that the species has in fact recovered, (2) the time frame within which the recovery effort is to be carried out, and (3) the estimated costs to the appropriate Service of carrying out the measures for which it will be responsible under the recovery plan. Currently,

some recovery plans do some of these things fairly well; few do all of them well. With information of this sort, however, this subcommittee could do a much more effective job of overseeing the implementation of the Act and of assessing the adequacy of the Administration's annual budget request for recovery activities.

Other Matters Warranting the Subcommittee's Consideration

In general, we believe the Endangered Species Act is well crafted and does not need major legislative overhaul. The few, narrowly drawn amendments we have suggested are minor refinements to an otherwise sound statute. There are, however, a number of new ideas that may warrant the subcommittee's careful examination as it carries out its oversight of the Act's functioning. Within the past two years, the wreck of the A. Regina off Puerto Rico raised questions about the government's ability to respond adequately to emergencies that pose a hazard to endangered species. The threatened breakup of that vessel on a reef adjacent to an important turtle nesting beach necessitated prompt removal action, but the expense of removal, and uncertainties about jurisdiction among federal agencies prevented prompt action. It may be appropriate, in light of that experience, to consider establishing a special fund or account that could be tapped for such unanticipated needs.

Another idea that may warrant consideration stems from the natural resource damage provisions of the Superfund law. Under those provisions state and federal trustees may sue to recover damages for injuries to natural resources, including endangered species, caused by the release of hazardous substances or oil spills. The salutary purpose of these provisions is to enable state and federal governments to restore injured natural resources and to impose upon those responsible for that injury the costs of restoration. Under the Endangered Species Act, those who lawfully destroy or harm endangered species are subject to civil and criminal penalties that serve as punishment for the offenses committed and a deterrent against future offenses. The goal of remedying the injury done to endangered wildlife resources is not necessarily served by this scheme, however. To serve that goal as well, the subcommittee may wish to explore the advisability of establishing a civil cause of action, similar to that created by Superfund, for recovering damages for injuries to endangered species that result from violations of the Act.

STATEMENT OF
DEFENDERS OF WILDLIFE
THE HUMANE SOCIETY OF THE UNITED STATES
THE NATURAL RESOURCES DEFENSE COUNCIL
THE SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION
GREENPEACE, U.S.A.
THE WILDERNESS SOCIETY
AMERICAN SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS
FUND FOR ANIMALS
ANIMAL PROTECTION INSTITUTE
INTERNATIONAL FUND FOR ANIMAL WELFARE
THE WHALE CENTER
AND
THE SIERRA CLUB
BEFORE THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION
AND THE ENVIRONMENT
OF THE COMMITTEE ON MERCHANT MARINE AND FISHERIES
ON H.R. 1467
A BILL TO REAUTHORIZE APPROPRIATIONS TO IMPLEMENT
THE ENDANGERED SPECIES ACT
MARCH 17, 1987
Presented By
John M. Fitzgerald
Defenders of Wildlife

Mr. Chairman, I am John Fitzgerald, Washington Representative for the Endangered Wildlife Program of Defenders of Wildlife. For many years Defenders has placed a special emphasis on endangered wildlife but my testimony today reflects not only the experience and concerns of our membership and staff around the country but the concerns of a number of organizations with diverse interests and expertise. On behalf of these groups I thank you for the invitation to testify today.

The Opportunity for A Positive Program

In the last year we have seen a very graphic symbol of what this Act was intended to do. In the Congressional District of Chairman Walter Jones, the red wolf has been returned to its native territory after becoming extinct in the wild. Chairman Jones and others who wanted red wolf recovery worked with the citizens of the area to design an experimental population program and with the Appropriations Committee to provide the funds needed for the program. Government agents once nearly wiped it out, but this Act, Chairman Jones and his constituents, and dedicated professionals in the Fish and Wildlife Service have literally given that species a new beginning. North Carolina can truly say "the wolf pack is back" and mean not only a great university basketball team. They have shown that the Act provides not only a way to slow the decline in rare species but a set of management tools for making possible the recovery of those species. As the red wolf reintroduction demonstrates, saving endangered species requires three things: a strong law, full funding, and

the bold use of both.

This Subcommittee today can begin the process of providing a strong law, funding to fulfill the promise of the law, and the direction and oversight to ensure that neither the law nor the funding is taken lightly.

I will commend to the Subcommittee's attention potential improvements in the Act and its administration.

I will briefly describe the resources needed, and in some cases, guidance suggested for major agency functions. A more detailed supplementary analysis of the budget needs of the Fish and Wildlife Service Endangered Wildlife Program is attached as an Appendix, and I request that it be included with my testimony in the record.

Before getting into current program needs, I would note that the Congress with the leadership of several Members including the Chairman of this Subcommittee, Mr. Studds, last year improved the protection of wildlife and other natural resources in this country, and provided a source of funds for their restoration without increasing the budget. By grafting the venerable concept of tort, that he who harms should pay to restore, onto the Superfund legislation in Section 107 the Congress had already made natural resources damage due to toxics and oil a compensable claim against potentially responsible parties. The new amendments require the designation of state and federal trustees who may sue to recover funds to be devoted to an off-budget trust for the restoration of resources damaged. The President must promptly notify these trustees of potential damage under

investigation and coordinate investigations and assessments with the trustees. (SARA 104(d), 107(d); CERCLA 104(b), 107(b), 301(c); 42 U.S.C. 9604(b), 9607(f), 9651(c).)

We recommend that the Subcommittee consider providing that other forms of damage to endangered and threatened wildlife in violation of the ESA are also compensable at restoration or replacement costs, to the extent determinable and practicable, and that in the interests of justice and efficiency, provide that citizens who present proof of a violation be authorized to bring such actions for damages. These damages could be paid to an account in the existing trust to be set aside for endangered species or entrusted to such parties as the court may find are able to carry out the restoration.

FISH AND WILDLIFE SERVICE

LISTING

Listing is the all-important first step in protecting a species; it signifies official recognition of its ailing status and sets in motion all other protective provisions of The Endangered Species Act. Why then do thousands of species remain candidates, a huge backlog of potentially threatened, endangered, or even extinct species waiting to be listed and protected? Because of a lack of resources and personnel, The Fish and Wildlife Service is unable, and perhaps also unwilling, to stop and reverse this backlog. Meanwhile, 80 species have been dropped from the waiting list because they are extinct and nearly 300 other candidates may be gone as well.

If consideration of new candidate species were to stop today, it would take over 20 years at the current listing rate to list those species already considered candidates. The Fish and Wildlife Service, however, plans to reduce the experienced listing staff in Washington's Office of Endangered Species which has already lost much of its role. Listing activity dropped 20% in 1986 and there have been fewer proposals for listing.

Shifting the listing task to less-experienced regional and field personnel has also brought more political and economic pressure to bear. Congress has required that listing be based solely on biological information. The decision to list must remain a biological consideration and Congress and the Service

should ensure that it does.

The solutions to these problems are simple and clear; speed up the listing process and maintain its integrity through sufficient staff, especially in Washington, and consideration of biological factors only. We recommend that the number of species listed annually be increased in order to clear the candidate backlog. With authorization ceilings that would accomodate appropriations for listing at the \$6 million per year level, status surveys for 80 to 100 species can be completed annually and within 10 years, most of the 960 critical, category 1 candidates would be listed or reclassified. Group listings, by ecotype or state, should also be emphasized; listing species together rather than singly is more cost-effective and should be utilized wherever appropriate.

As for species that must still await listing, we recommend and endorse the candidate monitoring provision described by Michael Bean of The Enviornmental Defense Fund. Such a system would prioritize listing, help determine when emergency listing is warrented and prevent species from becoming extinct while awaiting action.

Overall, we are very concerned with what listing reductions, a huge candidate backlog and further Fish & Wildlife Service reorganization portend/for endangered species. Unless the process is expedited and strengthened, more candidate species will undoubtably go extinct before their plight is even officially recognized. That flouts the intent of Congress and breaks a promise to all Americans.

THE CONSULTATION PROCESS

Section 7 of the Endangered Species Act requires that all federal agencies consult with the Secretary of Interior through the Fish and Wildlife Service to ensure that no federally funded or authorized actions will adversely effect an endangered or threatened species, nor significantly alter or destroy its habitat. The Service conducts both formal and informal consultations. The latter process is designed to resolve potential conflicts during the earliest planning stages of a project. If the problem cannot be worked out informally, the Service must then initiate a formal consultation.

Under formal consultation, the Fish and Wildlife Service must prepare a Biological Opinion on the effects of the proposed project on the listed species in question. If a "jeopardy" opinion is warranted, then the Service must identify "reasonable and prudent alternatives" to the proposal so that the adverse impacts can be avoided.

In FY1986 there were 52 jeopardy opinions out of nearly 11,000, up from 37 of 9,269 in FY85. Only two of the 52 were presented with no alternatives allowed - one barred the use of one pesticide by the Service itself in an area with many listed species though 7 other pesticides were still allowed. The other was a consultation after the fact when a private party sought a

Corps of Engineers permit for bulldozing that had already been done.

With 52 jeopardy opinions, it may seem that the Service is getting tougher. That is not necessarily the case. The Service in fact seems to be willing to let incidental taking sanctioned in biological opinions or committed by agencies or privated parties without the benefit of official sanction, chip away at listed species until there is only a remnant that may never be able to recover. A prime example is the case of the Stacy Dam and reservoir in west central Texas. In a May 5th 1986 conferral opinion completed when the non-poisonous water snake had been proposed by the Service and was waiting to be listed, the Service found that the proposed dam would eliminate most of the remaining snakes and most of the best remaining habitat thus jeopardizing the species. The Service also concluded that no on-sight alternatives would change that outcome. After this was brought to the attention of the Director of the Service he ordered a review. In December 1986, the Service reversed itself without the benefit of any new biological data on the snake and little more on its habitat. Its opinion and "prudent" alternatives are based on questionable assumptions such as the ability to breed by one year of age when no snake remotely related had ever reproduced in less than three years and on the assumption that untested artificial habitat will replace natural habitat when the Service policy reiterated in the May opinion was that that should not be relied upon as a step to avoid jeopardy.

Even for species with recovery plans, consultations are often

conducted with apparent disregard for the objective of those plans and of the Act which is the recovery and delisting of the species. As only a small fraction of listed species are known to be recovering, it would seem advisable to improve this process that has such an impact on those species.

Many consultations are not followed up and in other cases no consultation even takes place when it clearly should.

In an effort funded by the Environmental Protection Agency, the Center for Environmental Education studied the compliance of the Environmental Protection Agency's pesticide registration program with the Act's consultation requirements. They studied 36 cases where the pesticide use was such that its anticipated effect on listed species should have triggered a consultation. They found 12 in clear violation of the Act. In six registration was completed before the consultation; five did not include the steps that the Office of Endangered Species found in consultation to be necessary conditions of registration, nor any other similar precautions; and in one registration was completed without a consultation even being initiated. To EPA's credit they have admitted the findings and initiated a program of more careful oversight, education, and corrective labeling restrictions.

The general problem is not confined to the EPA. The Service does not appear to have range maps, let alone recovery plans, for listed species in many cases, thus making consultation rather difficult.

We recommend that action agencies be required under current

law to send a letter to the Service after consultation indicating what conservation steps will be undertaken in response to a biological opinion. Another letter should be sent after all the steps are implemented. This will expedite follow-up and help ensure that the action agency will meet its obligations under Section 7(a)(2).

We recommend that the Service be required to develop recovery plans in a timely manner that include range maps, except where omitted to protect the species, specific timetables and cost options or estimates for actions designed to bring about recovery in the most expeditious manner consistent with prudent conservation practices.

We also recommend that recovery plans be integrated with the consultation process so that biological opinions are consistent with the plans.

Appropriations for consultations have remained basically constant since 1979, despite growing demands. In their FY 85 Midyear Report, the Fish and Wildlife Service's Region I noted:

" The consultation workload is steadily increasing. However, the number of consultations underestimates the impact of the consultation subprogram workload. Many of the consultations are very complex and require extensive amounts of staff time (i.e. the 1985 OCAP formal consultation with BR has required a commitment of at least eight staff-months this fiscal year). Also we are now responsible for preparing pesticide registration of National scope for EPA. These require coordination with other Regional offices and extensive data gathering and impact analysis. Most of this data is not provided by EPA with their consultation request. Furthermore the area of impact is multi-state and multi-species. In the recent carbofuran registration, the Service is rendering an opinion on 34 species. Other factors not

reflected by numbers of consultations is the follow-up coordination and discussion between the Service and the Action Agency."

The amount provided in recent years is particularly inadequate since the number of consultations has been steadily increasing to the point where over 11,000 are expected for FY88 with the large increase in the number of formal consultations since FY84 expected to continue.

The Service's ability to consult carefully with agencies concerning the impact of actions on listed species must be enhanced given the fact that action agencies and private applicants are outspending the Service many times over in preparation for consultations. The Service is also expected to confer informally with the agencies concerning all actions affecting proposed species and many candidates. Conferral is a key to developing a system for effective monitoring of candidate species as contemplated by the amendment approved by the House in H.R. 1027 in response to extinctions among candidates.

There is a need for personnel and budgets to conduct on-site reviews (often called "ground-truthing") to assess compliance with the terms of biological opinions resulting from consultations and conferrals.

We recommend an authorization for Interior that will accommodate at least \$4 million in FY88 and \$7 by FY92. This will still provide less than half the resources per consultation that the Service had several years ago.

With the additional funds and personnel recommended, both

the species to be protected and the applicants for federal permits will be aided by a faster and fuller consultation process.

Exporting Extinction

In the Endangered Species Preservation Act of 1966 the Congress recognized that extinction was happening not just to a few species but to vast numbers not only because of overharvesting but because man was altering the habitat itself in a permanent way. The Act the Secretary of Interior to begin a conservation program for these species. The Endangered Species Act of 1969 directed the Secretaries of Interior and State to take several steps one of which was to initiate and conclude "a binding international convention on the conservation of endangered species."

The result was the 1972 Convention on International Trade in Endangered Species of Wild Fauna and Flora. In order to implement that Convention and several others, and to provide stronger protections than the earlier Acts had provided the Congress in 1973 enacted the statute that we refer to as the ESA.

In 1978 final regulations were approved that required agencies to consult with the Service to ensure that their actions did not jeopardize listed species anywhere, including foreign countries.

In 1981, the new Administration adopted the unpublished position that it would not require consultation concerning overseas effects despite the fact that half the species on the

list are overseas and no amendment of the sort or with any bearing on overseas consultation had ever been adopted. On June 3, 1986, after both the House and the Senate had effectively completed all substantive work on the reauthorization bills, the Administration promulgated in regulations the policy of ignoring effects of agency actions on listed species in other countries.

The result is that many of the species that the public identifies as endangered such as tigers, asian elephants, leopards and jaguars may be jeopardized by U.S. agency actions without any notice or attempt to prevent it.

In August, 1986 these regulations were challenged in U.S. District Court as contrary to the Act. No injunction against a project was sought. We requested only the proper application of the law's consultation process in appropriate regulations. The case was ordered dismissed in late February for lack of case or controversy as required by Article III, Section 2 of the Constitution. The judge noted that we would have had to sue again if the agencies did not voluntarily consult with the Service concerning their projects and therefore correcting the regulations regarding consultation would not necessarily prevent the alleged harm to the endangered species in the areas of agency projects. (Memorandum Order 3-86 CIV 757, 10, February 25, 1987, U.S. District Court, District of Minnesota). The decision is being appealed.

LAW ENFORCEMENT

A little more than one third of the law enforcement budget of

the FWS is derived from the endangered species act and appropriations to enforce it. With it the FWS supports the work of 133 people carrying out surveillance, investigations and education concerning the enforcement of the ESA. In the Wildlife Permit Administration 24 people review and grant or deny permits to transport wildlife under the Convention on International Trade in Endangered Species (CITES).

The law enforcement approach of this Administration does not do justice to the Act. The number of agents does not begin to address the need.

A Special Agent In Charge of one of the Regions of the FWS (or Districts for Law Enforcement purposes) wrote in his FY85 summary:

All Districts are suffering from a lack of funding and manpower. We're all short on SA's (Special Agents) and the funding necessary to support the SA's we presently have. These shortfalls,...will increase the already declining SA morale.

Furthermore, the interpretation and/or applicabtion of the law is nearly a century out of date. For example, destruction of habitat is probably the single greatest threat to most species.

This policy of limited enforcement is an intentional one: the number of new investigative matters pursued was cut nearly in half, from 20,895 to 11,319 during the period of FY81 - FY84. In its End of Year Report (FY85 Report) the Division of Law Enforcement explained,

No reliable direct measures of law enforcement effectiveness have yet been developed. However, the

Service has become convinced that the effectiveness of its law enforcement effort can be maximized by directing its attention away from incidental taking of wildlife and toward investigations of illegal commercialization of the nation's wildlife resources.

Therefore, the Service has staged a series of large operations that typically involve undercover investigators who set up commercial operations in bear, wolf and lynx furs, eagles and their feathers, and peregrin and other falcons. Some assert that such operations encourage illegal taking that would otherwise not occur. The Service responds that such operations can clean up whole networks and scare off others through the publicity following the "stings".

There is clearly a need for more enforcement against such direct commercial taking, but that does not mean that we should forget entirely about incidental take.

The Congress in 1982 amendments to the ESA provided for incidental take permits or allowances for those private persons (under Section 10) or agencies (under Section 7) that develop with the FWS an approach that minimizes the harm and mitigates the damage related to a project that may take some of a population or its habitat, but will not jeopardize the species.

Since Congress has provided that process, there is no longer any excuse for not vigorously prosecuting those who avoid that process and end up killing listed species or despoiling their habitat. The Fish and Wildlife Service do investigate taking by habitat destruction but the Service and the Justice Department must be encouraged to fulfill their obligations in that regard more fully.

Increasing Protection for Plants

In recent years the Congress has been prodding the Service to do more to protect plants using its current authority. Some progress has been made.

In 1985, the Service began finally to enforce the ESA and related laws that protect listed plants obtaining a plea of guilty to illegal trade in endangered orchids in Michigan, and initiating several investigations and arrests in the west. Problems continue with stopping trade and vandalism that affect listed plants.

Since the Act was signed into law, protection for listed plants has been minimal. In 1982 protection against collecting on federal land was provided in an amendment to the Act, but protection against intentional harm on federal lands and any taking on private land have not been addressed by the Act.

Unfortunately, most state and local police forces have little expertise in botany.

We recommend that the Act forbid the intentional harming of listed plants on federal land and the taking of listed plants on land other than federal land in violation of state law such as trespass or conversion.

The House Merchant Marine Committee Report on H.R. 1027 which was approved by the House in July of 1985 contained language directing the Service to use its current authority more aggressively. In following up on those suggestions we would hope the Service would also:

1. Implement a process for regular communication with nature conservancy groups, Heritage programs, wildlife organizations, and garden clubs concerning the status of endangered and threatened plants, particularly those on private lands;
2. Implement voluntary management agreements or programs to provide advice and assistance to private landowners with listed plants;
3. Implement a program to alert and assist law enforcement agencies that have jurisdiction over the theft, destruction, or illicit trade in private plants. This should include the aid of Service botanists and field and forensic personnel;
4. Develop and implement additional direct approaches for protecting plants such as acquiring from willing landowners small federal interests in critically endangered plants on private land where appropriate (already authorized under Section 5).
5. Report to the Congress within one year on the status of plant protection and the enforcement of plant protection provisions.

Recommended Authorization

A great shortage exists in both personnel and funds available for law enforcement. We recommend an authorization level for Interior that will accomodate an appropriation of \$9.4 million per year for law enforcement through FY1992.

RECOVERY

The recovery process is the element of the Endangered Species Act that Administration has publicly emphasized as the focus of its endangered species efforts. Indeed, until 1985, the number of approved recovery plans increased annually.

Unfortunately, the number of new plans has dropped considerably to twenty-two -- less than one-third of The Fish and Wildlife Service's annual objective of 77 new approved plans. Furthermore, competing demands upon staff have caused implementation of existing plans to suffer; of 425 US species listed as threatened or endangered, 245 have recovery plans most of which are not being actively implemented. Only about three percent of the species appear to be recovering.

The Desert Tortoise, listed as threatened in Utah, is a sad example of an ineffective recovery program. Originally proposed as Endangered, the Beaver Dam Slope population of the tortoise was listed as Threatened in 1981 after the Bureau of Land Management promised to take corrective management actions on its behalf. Both the FWS and the BLM have resisted management actions that would interfere with livestock operations on the Beaver Dam Slope and now only a draft recovery plan for this population exists. Meanwhile, the Utah Division of Wildlife finds that 50% of the population has died-off since 1981 and the situation seems bleak. The Service has refused to list list other populations of this species and its inaction places the Desert Tortoise at further risk of extinction.

Development and approval of new recovery plans must be

increased to keep pace with species listings and to reduce the backlog of listed species without recovery plans.

Plans by themselves, however, are not enough. The Service must be aggressive and other federal agencies must be willing to accept their responsibilities under Section 7(a)(1) to implement recovery programs before more listed species go extinct while awaiting protection.

The Subcommittee and the Service may want to consider more specific requirements for recovery plan preparation and implementation as noted above under consultation and in Mr. Bean's testimony. Other agencies beyond those represented here today could also be asked to assign responsibilities and report on their Section 7 (a)(1) conservation programs.

We recommend an authorization level that would accomodate an enhancement of 6.3 million dollars that would enable the recovery program to meet its basic responsibilities ensuring that plans are designed, implemented and reviewed as necessary.

Recovery of Predators - Grizzlies and Wolves

The recovery of endangered and threatened predators often presents considerable controversy. These predators symbolize the plight of endangered species in the minds of many. Their recovery is an objective of federal law. Most people favor their restoration. For example, a survey by graduate students of the University of Montana determined that the vast majority of visitors to Yellowstone National Park favor the reintroduction of the wolf there even in the unlikely event that it might mean restrictions on the use of certain parts of the Park.

The process of recovery for species such as grizzlies and wolves has been halting. After a very lengthy process a recovery plan for the Rocky Mountain wolf that adopts the recommendations of the recovery team - particularly that (Canadian) wolves be reintroduced into Yellowstone National Park as one of three recovery sights -- may soon be approved.

This plan takes advantage of the experimental populations provision (10(j)) of the Act to provide for flexible management of the species. It also sets a very low threshold for delisting that will necessitate careful monitoring after delisting but provides for a near term, achievable goal.

In regard to wolves and grizzlies, a 1985 Court decision is often misunderstood to ban the taking of threatened and endangered species. It does not.

On February 19, 1985, the U.S. Court of Appeals for the Eighth Circuit ruled in Sierra Club, Defenders, et al v. Clark (755 F.2d 1506) that the Secretary of the Interior may not authorize sport hunting or trapping of a species listed as "threatened" under the Endangered Species Act. The Court upheld the decision of Judge Miles Lord in favor of plaintiffs Sierra Club, Defenders of Wildlife, The Humane Society of the United States, the National Audubon Society, and eleven other conservation and wildlife organizations.

The lawsuit had challenged the "sport trapping" season planned for wolves by Minnesota (where there are approximately 1200 wolves) on the grounds that the Endangered Species Act forbids such a general "taking" of threatened species unless the

Secretary finds that excess population pressures within a given ecosystem cannot otherwise be relieved and that the taking would help to conserve the species. It was generally expected that this decision could also affect the ability of the state of Montana to carry out its annual sport seasons on grizzly bears. Like the Minnesota wolf, the grizzly is listed as threatened in the lower 48 states, but the status of the grizzly population is less certain, consisting of between 400 and 800 individuals.

On behalf of the ESA Reauthorization Coalition, Michael Bean of the Environmental Defense Fund defended the decision in testimony in 1985 on H.R. 1027 and on the Senate bill, S. 725, and noted:

[I]t is important to examine the court's decision closely.

First, the court did not limit the Secretary's authority to take or authorize the take of predating or depredating animals in order to protect life or property. Indeed, the court left open two different means by which this can be accomplished: general regulations authorizing predator control activities and special permits under Section 10(a)(1)(A) of the Act. The latter authority is equally applicable to both threatened and endangered species. Thus, the often proffered argument, that effective control of endangered or threatened predators is necessary to sustain public support for their conservation and deter vigilantism, can be accommodated under the court's opinion.

Neither does the decision limit the Secretary's discretion with respect to species that are part of an "experimental population." Instead, the court very clearly refrains from reaching any conclusion on that issue. Thus, the very narrow decision of the Court is that the Secretary may not authorize sport hunting of a non-experimental, threatened species unless, as the Act's definition of "conservation" specifies, extraordinary population pressures cannot otherwise be relieved. That narrow prohibition will have virtually no impact on sport hunting in the United States because most hunted species do not face the threat of

extinction within the foreseeable future. For a species that does, however, and is thus listed as threatened, the original drafters of the Act properly concluded that sport hunting of it would not be an objective of its conservation, but rather a permissible means, in very limited circumstances, of securing its conservation. Absent any new and compelling basis to reconsider that judgment, the conclusion reached in 1973 should be continued.

Defenders' testimony noted in addition the strong public support for wolf recovery.

In a related development, on March 7, 1985, Professor Stephen Kellert of Yale University announced the results of a study on "The Public and the Timber Wolf" jointly sponsored by the U.S. Fish and Wildlife Service, the U.S. Forest Service, Defenders of Wildlife, and several independent foundations and donors. The study of attitudes of Minnesotans found that the strong majority of those both near and far from the wolves of northern Minnesota disapproved of sport seasons or other general reductions in wolf populations even where they are abundant. Although the vast majority support protecting wolves, they did agree with the humane taking of individual wolves that were guilty of killing livestock. In Minnesota and Montana such predating animals are removed by trained government agents. Minnesota also compensates farmers for livestock losses due to wolf predation.

The study found that support for the wolf is the general rule, as the large majority of Minnesotans in every age, economic, and racial group feels that the wolf belongs in Minnesota, and not just in places like Alaska.

The Act requires that the federal government assist in the recovery of threatened species. Recovery of the existing populations of the Minnesota gray wolf and the Montana grizzly would not, according to available information, be aided by a hunt. The gray wolf population is at best holding its own against substantial illegal kills each year. The grizzly population is uncertain and may well be declining. In fact, a task force of the Interagency Grizzly Bear Committee concluded in

1984 that available population data did not permit the task force to even confirm population stability in the grizzly bear population of the Northern Continental Divide Ecosystem. Since then Montana has done its own assessment of the grizzly and the Service has initiated discussions with the State concerning the delisting of the grizzly in Montana's Northern Continental Divide Ecosystem.

Proponents of the movement to weaken the ESA often argue that a sport season even without extraordinary population pressures is necessary to successfully manage threatened species and to reduce public animosity toward such species. These arguments are not compelling. The ESA, as presently written, grants the Secretary of Interior a great deal of flexibility in the management of threatened species. Diseased animals can be taken, as well as those that have killed livestock or threatened human life. In Minnesota livestock depredation is minimal (less than 1/10 of one percent of all livestock is affected, and less than 1/3 of one percent of all farms suffer losses) and has been successfully controlled by an animal damage control program administered by the Fish and Wildlife Service and now by the Agriculture Department under Service guidance.

Without a practical need for an amendment and with much risk presented by an amendment, we repeat our opposition to any amendment to the Endangered Species Act or Committee Report language which would permit or encourage further taking of threatened wildlife.

The Act simply requires that we judge every proposed hunt

of threatened species on the merits of the data concerning each ecosystem.

We remain open to constructive discussions and cooperation to ensure the recovery of these animals in a responsible manner.

STATE COOPERATION

The Endangered Species Act authorizes States and the Federal government to develop cooperative agreements; today, there are 76 such agreements with 46 states and territories. Funding levels, however, have remained essentially constant since 1977 when there were only 21 agreements, and the FWS has not requested a penny for 1988.

Since states depend on these grants. Without them they are hard pressed to plan and implement recovery activities. As noted in testimony of others today the program is essential for the conservation of many of our listed species. We recommend that appropriations of \$15 million be authorized and that \$25 million be authorized by FY92. An average of one half million dollars for each state is by no means going to exhaust the work needed on behalf these species by the state agencies.

National Marine Fisheries Service

The National Marine Fisheries Service (NMFS) of the Department of Commerce is responsible for listing and recovery of endangered and threatened marine species.¹ Nineteen marine

species are now listed under the Endangered Species Act, including all seven species of sea turtles, the shortnose sturgeon, several species of seals, and most of the great whales. All marine mammals also are protected by the Marine Mammal Protection Act, so NMFS's protected species work coordinates activities and budgets authorized under both Acts.

Only limited progress toward the recovery of endangered marine species has been made to date. In 1985 NMFS made its first listing of an endangered species in nearly six years when the Gulf of California harbor porpoise was so designated. The listing was prompted by Defenders' 1978 petition to list the species. In order to prompt recovery action, Congress appropriated funds in FY86 and 87 for the specific purpose of developing and implementing a recovery plan for the porpoise which is the world's smallest and rarest cetacean.

In 1985 NMFS also published proposals to list the Guadalupe fur seal as threatened and to designate critical habitat for the Hawaiian monk seal. A 1985 petition to list the Chinook salmon was found by NMFS to present substantial information. These actions, too, were externally stimulated.

The listing of the Guadalupe fur seal was eventually finalized during 1985. Critical habitat for the Hawaiian monk seal, however, was not designated by the one-year statutory deadline. Consequently, the Sierra Club and Greenpeace International filed a lawsuit in early 1986, charging that NMFS was in violation of both the Endangered Species and Marine Mammal Protection Acts by failing to designate habitat for the species. Twice in the past six years, NMFS's own Hawaiian Monk Seal

Recovery Team has made similar recommendations.

Only six species have been listed by NMFS and only two recovery plans approved. Essentially all as a result of threats of lawsuit or specific Congressional direction. Enforcement is nearly non-existent, particularly for reports of unpermitted incidental take. There are no invertebrate biologists on staff though many acknowledge the need to assess and protect rare corals and other life forms.

The National Marine Fisheries Service is very weak in most aspects of its program from listing through recovery, law enforcement, consultation, and research on behalf of endangered and threatened wildlife. Some have proposed that the Office of Protected Species be moved or otherwise substantially reformed. While we do not address this question today, we believe that wherever it is housed, it needs better oversight and more resources. The level of authorization proposed in H.R. 1467 is a step in the right direction but should be increased to \$7.5 million from FY88 through FY92 in order to set up and maintain more systematic approaches to these functions expected under the Act.

Summary of Recommended Authorization Levels

While alternative funding sources are not within the scope of this testimony, I will point out that several groups in the conservation community including Defenders and others represented here have, over the last two years in particular,

presented recommendations for savings in the budget that will more than accomodate these relatively modest increases and contribute to the conservation of the public's natural resources at the same time.

We have recommended levels for FY88 and FY92 with increases in stages in the interim years. These are in 1987 dollars and should be adjusted for expected inflation in accordance with Congressional Budget Office projections.

Our recommended authorization levels are summarized as follows in millions of dollars:

<u>Department</u>	<u>FY88</u>	<u>FY92</u>
Interior	53.8	69.0
Commerce	7.5	7.5
Agriculture	2.2	2.6
Cooperation with States	15.0	25.0
Exemptions	.6	.6
Convention Implementation	.5	1.0

Thank you, Mr. Chairman, that concludes my testimony.

Defenders OF WILDLIFE

FISH AND WILDLIFE SERVICE
ENDANGERED SPECIES PROGRAM
BUDGET REQUIREMENTS

A SUPPLEMENTARY ANALYSIS TO ACCOMPANY TESTIMONY ON

H.R. 1467

A bill to Reauthorize Appropriations
to Implement the Endangered Species Act

Before The

Subcommittee on

Fisheries, Wildlife Conservation and the Environment

Committee on Merchant Marine and Fisheries

U. S. House of Representatives

Presented by

John Fitzgerald

Washington Representative

Endangered Wildlife Program

March 17, 1987

The budget totals recommended in this document reflect the general consensus of the Endangered Species Act Reauthorization Coalition of some 30 Conservation and Animal Welfare Organizations. Members of the Coalition contributed substantially to the analysis and in some cases the drafting according to areas of expertise. This analysis also contains examples of enhancements Defenders and others have recommended for specific projects for Fiscal Year 88.

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**Fish and Wildlife Service
Endangered Species Program**

Dollar Amounts in Thousands
(Personnel levels are in parentheses)

	FY88 Administration Request	Change from Admin. Req.	Recommended Total
Listing	3,222 (59)	+3,778 (+28)	7,000 (79)
Law Enforcement	5,843 (132)	+ 3,598 (+35)	9,441 (167)
Permits	859 (24)	+ 100 (+2)	959 (26)
Consultation	3,022 (75)	+ 978 (+16)	4,000 (91)
Recovery	5,819 (53)	+ 6,381 (+32)	12,200 (85)
Research and Development	4,742 (65)	+ 258 (+4)	5,000 (69)
Cooperation with States	0 (0)	+15,000 (8)	15,000 (0)
Fisheries, Hatchery Operations - ESA	163 (3)	0 (8)	163 (3)
<hr/>			
Total	23,670 (411)	+38,093 (189)	53,763 (520)

FY89 - 92:

Consultation: \$5, 6, 6.5, 7 million.

Recovery: \$14, 17, 20, 23.2 " .

State Cooperation: \$15, 19, 23, 25 " .

The remaining functions would be level-funded.

**Fish and Wildlife Service
Endangered Species Program**

Dollar Amounts in Thousands
(Personnel levels are in parentheses)

	FY88 Administration Request	Change from Admin. Req.	Recommended Total
Listing	3,222 (59)	+3,778 (+28)	7,000 (79)

Proposed and Final Listing

\$6,000,000

The Endangered Species Act requires that the Secretary list species that warrant it as endangered or threatened. This key function is done by federal employees but so few are assigned to the task that a large backlog of species that warrant or may warrant listing has existed for years. Species are literally becoming extinct while waiting to be protected.

The current backlog of species for which existing data support listing is approximately 960 candidates (Category 1) At the \$6m/yr. level these species could be listed in 10 years while appropriate delistings, reclassifications, and a modest number (20) of the approximately 2940 backlogged Category 2 candidate species could be accommodated annually, as needed. (Based upon approx. 3/yr average cost of \$48,000. per species for listing, delisting or reclassification.)

It is necessary that FWS/OES achieve and maintain a higher listing rate than in the past in order to avert extinctions among candidate species and in order to fulfill the purposes of the Act.

Status Surveys

\$500,000

The current backlog of candidate species for which additional information is needed to determine whether listing is warranted is over 2900 species. (Category 2 candidates). At the current cost estimate of \$6,000/per status survey the status of between 80 and 100 species could be determined annually, and thus decisions made as to whether listing is needed.

Candidate monitoring/Prelisting**\$500,000**

This is to develop and implement an effective system for monitoring candidate species and taking action to conserve them in order to prevent extinction, avoid the need to list them, if possible, and determine whether emergency listing is necessary, if interim conservation steps will not reverse declines. This system should also be considered for application to recently delisted species. (Based on H.R. 1027, Section 1(a), approved by the House July 29, 1985.)

The Director of the Fish and Wildlife Service is planning to reorganize the Service. One effect of the recommendations under consideration would be a drastic reduction in the staff and role of the Washington, D.C. office of Endangered Species (OES) in the development of the list of "Endangered and Threatened Wildlife and Plants". Much of the role of the experienced staff of the listing branch of OES has already been eliminated. With increasing decentralization of the Service since 1984, for example, the lead responsibility for initially developing most listing packages has been given to field and regional Service Biologists.

We are quite concerned about what further reductions of OES may portend for endangered species. At a time when listings must be enhanced in order to avert further extinctions among the qualifying candidate species backlogged for listing (over 900), the Service's listing pace is dropping. Only 45 species were listed in calendar year 1986, compared to 60 in calendar year 1985. Indications are that the situation will not improve in 1987. The decline in performance may be due at least in part to the shift in listing responsibilities which has already occurred.

We therefore urge the Committee to instruct the Service that the funds provided in this line item are to increase the current pace of, and personnel for, listing and not to decrease either pace or personnel

Fish and Wildlife Service
Endangered Species Program

Dollar Amounts in Thousands
 (Personnel levels are in parentheses)

	FY88 Administration Request	Change from Admin. Req.	Recommended Total
Consultation	3,822 (75)	+ 978 (+16)	4,000 (91)

The Act requires that agencies consult with the Secretary to ensure that their actions will not jeopardize species or harm critical habitat.

An enhancement of \$778,000 will provide for increased federal personnel to conduct consultations and on-site reviews to determine conditions in the field and after consultation to assess compliance with the terms of biological opinions. The annual number of consultations is roughly five times what it was in 1979 and the appropriations level is lower now in real dollars. The Service had adapted by conducting far more informal consultations but the number of formal consultations has been increasing recently and the quality of the consultation process, both in the formulation and the enforcement of the terms of biological opinions, has declined overall as the Service attempts to meet its 90 day consultation deadlines. This can result in damage to listed species and their habitats to such an extent that recovery is delayed and declines are caused contrary to the intent of the Act.

An enhancement of \$200,000 will ensure the continued development and implementation of the Endangered Species Information System (ESIS) to provide the information needed to conduct accurate and timely consultations.

By FY92, Consultation should be funded at at least \$7,000,000 given the increase in species, in formal consultations required, and the need to increase quality while maintaining timeliness.

Fish and Wildlife Service
Endangered Species Program

Dollar Amounts in Thousands
 (Personnel levels are in parentheses)

	FY88 Administration Request	Change from Admin. Req.	Recommended Total
Recovery	5,819 (53)	+ 6,381 (+32)	12,200 (85)

The Act requires that the Secretary develop and implement recovery plans for every species listed unless he finds affirmatively that such a plan will not promote the conservation of the species. These plans are to help guide interagency planning and consultation under Sections 7(a)(1), (affirmative conservation by the Secretary and others), and 7(a)(2), (preventing government action from jeopardizing species).

The Secretary has approved plans for only 243 of the 928 species listed. Roughly 40 percent of 420+ listed species found in the U.S. have no approved recovery plan. Other plans in need of revision languish. In the mid-1980's far less than half of the approved plans were being actively implemented. Most of those that are implemented are only implemented to the extent necessary to avoid extinction or maintain current populations. Relatively few of the actions called for in the plans to move beyond maintenance and bring about recovery are ever taken. One result is that in 1984, the last year such reports were compiled, the Service's recovery implementation reports, covering 234 species, showed that only 23 species were known to be increasing, 10 were stable, trends for 154 were unknown and over 30 listed species were at crisis population levels or presumed extinct. Since then new species have joined that group. For example, the Black-footed ferret has fallen from 129 to around 20 and the Palos Verdes Blue Butterfly has been literally bulldozed into oblivion.

An enhancement of \$6,381,000 would enable this element of the endangered species program to begin to meet its basic responsibilities to move species toward recovery and removal from the list. By 1992 the program should have \$23,200,000 especially considering new recovery plans and newly listed species. Until such an investment is made, the daily indirect costs of managing endangered wildlife and the frequent costs of crisis intervention will outweigh the "savings" from underbudgeting for recovery.

This should include a minimum of \$900,000 for recovery planning to enable the Service to ensure that they will be able at least cover direct planning costs and keep up with the listing of new species anticipated while making progress in reducing the backlog of recovery planning.

This total should also include a minimum of \$300,000 for the revision of plans as the Secretary reviews the status of listed species every five years.

Wolf Recovery Funding

-Eastern Timber Wolf - Enhancement of \$305,000: \$275,000 is needed to determine the extent, cause, and corrective steps necessary for controlling the incidence of heartworm and parvovirus; for working with state agencies to minimize the negative impact of road-building in wolf habitat, to continue the monitoring necessary throughout the seven wolf study regions to assure an adequate natural prey base and an adequate depredation control program and enhance public education about the wolf. In Wisconsin \$30,000 is needed for more aggressive measures such as vaccination. Wisconsin is home to about 20 timber wolves that have come from Minnesota in recent years. Their recovery has been threatened by attacks of heart worm and parvovirus, diseases thought to be introduced by man or his pets.

Rocky Mountain Wolf - Enhancement of \$350,000: \$80,000 is needed for either the FWS or the Park Service to continue the monitoring of wolves and their prey base in the Glacier National Park area that is necessary in order to design an adequate depredation control program and implement an effective recovery program. \$30,000 for public education and information including a slide/tape program and printed materials about wolf recovery; \$80,000 for surveys of public opinion necessary for effective targeting of public education efforts; \$10,000 on research on wolf-prey relationships. \$100,000 for non-lethal depredation control technologies such as guarding dogs, taste aversion, and radio-triggered tranquilizing collars; \$50,000 for developing and implementing a joint public-private program to of compensation for livestock lost to experimentally reintroduced populations of wolves.

The recovery total should include a restoration and enhancement of \$170,000 for continuing the red wolf reintroduction project. The establishment of a self-sustaining population of red wolves at Alligator River NWR is a priority project, which should be fully funded. For FY88 \$140,000 is needed to support work following the release of the wolves on the refuge in Spring FY87. (Costs include salaries for 2 FTEs to monitor and track the wolves, tracking equipment and air time, and travel for the

project coordinator and two additional pairs of wolves to be brought to the refuge.) An additional \$30,000 is needed to pursue other red wolf release sites and to assure wild young will be available for future reintroductions. Reprogramming of existing base funds as the Administration proposes to support the red wolf project will take funds from other endangered species, including probably sea turtles and the red-cockaded woodpecker.

Too often recovery funds are provided by Congress and to a certain extent by the administration to the "glamor" species and less appealing species are neglected. For example, bats in U.S. Territories.

The recovery total should include \$35,000 for an educational program in bat conservation for U.S. Pacific Territories. Five to six hundred endangered Marianas fruit bats (*Pteropus mariannus*) remain on the island of Guam. A proposal to expand the listing of this bat to islands in the Commonwealth of Northern Mariana Islands (CNMI) is under consideration by the Fish and Wildlife Service. Overhunting, poaching and predation by the introduced brown tree snake continue to play major roles in the decline in bat numbers on Guam and on a number of other islands in the Marianas and Micronesia.

The decline in fruit bat numbers in the Pacific is having a serious effect on the ecology and agricultural economy of the islands.

The production of an educational slide and video program is critical in the education of islanders about the importance of bats to island ecology. Such a presentation could provide information about the importance of bats to Pacific plants, such as breadfruit, coconuts and mangos and the problems which their extirpation could cause. The need for bat management would also be addressed. The program would be widely distributed throughout the region, particularly to schools.

In sum, in order to accomplish recovery for the many listed species, glamorous or otherwise, a substantial appropriation for general recovery work is essential. Therefore, the remainder of the recovery enhancement should be directed toward actions called for in plans or other actions clearly warranted for conservation and recovery.

**Fish and Wildlife Service
Endangered Species Program**

Dollar Amounts in Thousands
(Personnel levels are in parentheses)

	FY88 Administration Request	Change from Admin. Req.	Recommended Total
Research and Development	4.742 (63)	+ 250 (+4)	5,000 (69)

The Fish and Wildlife Service's Research and Development activities seek new strategies to enhance the survival and recovery of endangered species. There are two major thrusts to the Service's efforts in this area: biological studies and captive breeding programs.

Biological studies provide a greater understanding of the special characteristics of an animal and its habitat to speed recovery of the species. For example, Fish and Wildlife scientists are examining the behavior and environmental requirements of the Florida panther, the gray wolf, the woodland caribou, and the West Indian manatee, among others.

Captive breeding has as its objectives the establishment of wild populations of listed species in suitable habitat, or enhancing existing populations already in the wild. One of the most notable efforts in this area has been the rise of the whooping crane through captive propagation and its reintroduction into former native habitat.

An enhancement of \$258,000 will allow continuation of these important studies, keeping the research capacity at a level necessary to support ongoing recovery efforts. The modest increase recommended will allow some important additional work to be performed, such as a study on the prey base for gray wolves in the western United States. Other needed studies include theoretical and general research on population viability; the application of island biogeography and biosphere reserve concepts to endangered species management; and baseling information on many endangered animal and plant species. General and theoretical research will become increasingly important as habitat continues to be lost and problems of genetic management increase. Taking a preventive approach to management would increase the chances of preserving species before they reach

critically low levels, making management more effective and less costly.

Increases in funding for endangered species-related research in the Cooperative Fish and Wildlife Research Units would complement the FWS R&D program. The in-house FWS research effort has tended to focus on a relatively few high-profile species. Expanding endangered species work in the Cooperative Research Units would provide a needed increase in the kinds of species covered.

**Fish and Wildlife Service
Endangered Species Program**

Dollar Amounts in Thousands
(Personnel levels are in parentheses)

	FY88 Administration Request	Change from Admin. Req.	Recommended Total
Law Enforcement	5,843 (132)	+ 3,598 (+35)	9,441 (167)

The Service is responsible for pursuing those responsible for violations of the Endangered Species Act, and for gathering the necessary evidence for prosecution. The administration's approach to endangered species law enforcement does not do justice to the Act. It provides neither the personnel nor the direction to properly enforce the law. The current funding level cannot even cover all costs, such as travel costs, for all agents, which considerably reduces their effectiveness.

An enhancement of \$3,598,000 will allow the full utilization of the existing agents and the addition of critically needed personnel. It would also allow some funds for continuing the improvements in forensic capability started in previous years with funds for the forensic laboratory, now under construction.

The current number of Fish and Wildlife special agents is inadequate to meet the need: wildlife violations go uninvestigated for lack of funds. In addition, current funding cannot cover all necessary costs for existing agents. Cost per agent is about \$85,000/year, including overhead, travel, costs of hiring expert witnesses, and other needs. The recommended enhancement would allow the addition of at least 25 special agents plus equipment.

These agents are needed to protect well-known species such as wolves, bears, and eagles but they are also sorely needed for other duties such as endangered species enforcement in U.S. Territories.

The total enhancement should include \$88,000 for the placement of a FWS enforcement agent on Guam to protect the ten listed Guam species for which the Service is responsible.

From 1981 to 1984, the Fish and Wildlife Service maintained a

single law enforcement agent on Guam. By the time that the Marianas fruit bat was listed as endangered in 1984, however, that the agent had left the island. Following his departure, an agent from the National Marine Fisheries Service, working under a memorandum of understanding with the FWS, has been assigned to the island. That agent left Guam in late 1986. Since that time, there has been no enforcement of endangered species laws on the island.

Inspectors

Wildlife inspectors examine import and export shipments at 9 designated ports, plus others on the Canadian and Mexican borders. In 1986, these shipments were estimated at 70,000. A particular problem is the large containers which can conceal wildlife products; over 1,000,000 containers enter Newark each year. The current number of inspectors cannot cover this number of shipments. The general enhancement would allow adding 10 inspectors (at \$32,000/inspector) at the Port of Newark.

**Fish and Wildlife Service
Endangered Species Program**

Dollar Amounts in Thousands
(Personnel levels are in parentheses)

	FY88 Administration Request	Change from Admin. Req.	Recommended Total
Permits	859 (24)	+ 100 (+2)	959 (26)

The Wildlife Permit Office issues permits under the Endangered Species Act and the Convention on International Trade in Endangered Species (CITES), compiles CITES annual reports, and acts as the CITES Management Authority for the U.S.

An enhancement of \$108,000 will allow hiring additional staff or letting contracts to analyze information on the permits, primarily for imports under CITES, to detect suspected violations. These violations would then be reported to Law Enforcement for investigation. The task of analyzing permit data is currently done by conservation organizations which are unable to provide the consistent analysis the program demands.

**Fish and Wildlife Service
Endangered Species Program**

Dollar Amounts in Thousands
(Personnel levels are in parentheses)

	FY88 Administration Request	Change from Admin. Req.	Recommended Total
Cooperation with States	0 (0)	+15,000 (0)	15,000 (0)

The goal of state grants under Section 6 of the Endangered Species Act is to encourage cooperative agreements between the states and the federal government to multiply endangered species work.

Section 6 provides financial assistance for a key element of successful treatment of endangered species. State grants are an integral part of the data gathering and recovery process. Section 6 grants stimulate interest and build expertise at the state level as well as increase the resources devoted to endangered species work through the state match.

In 1977, there were 21 cooperative agreements and an appropriation of \$4,000,000, providing almost \$200,000 per agreement. Today there are 76 cooperative agreements with 46 states and trust territories, a nearly four-fold increase in the number of agreements. Appropriations in FY87 totalled \$4,300,000, essentially the same amount appropriated ten years ago when there were only 21 cooperative agreements. While Section 6 provided \$200,000 per agreement in 1977, today it averages only \$57,000, a woefully inadequate sum, and five cooperative agreements receive no funding at all. In addition, the number of federally listed species has increased from 623 in 1977 to 937 in 1986.

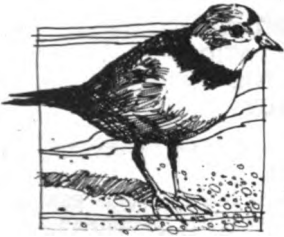
An enhancement of \$15,000,000 will allow funding all cooperative agreements, including those currently without funds, at the FY77 level. The small amount of money currently available to each state makes it very difficult to carry out an effective endangered species program at the state level. In requesting Section 6 grants states have reduced their requests and have curtailed

their endangered species activities because of their prior knowledge that Section 6 funds would not be available. The states are willing and able to make good use of more funds. The following examples illustrate existing activities plus the kinds of activities to which states would give priority with significantly higher amount of Section 6 funds.

- Massachusetts received \$16,000 to develop a recovery plan and life history of the Plymouth red-bellied turtle. Far more research and work on habitat protection needs to be done for the piping plover, the short-nosed sturgeon in the Merrimack River, the Atlantic Ridley sea turtle, the roseate terns at Cape Code and the small-whorled pogonia.

- New York received only \$19,500 of the \$71,000 it requested for work on its endangered plants.

- The Florida panther numbers are probably between 20 and 30 and depends on Section 6 funding for much of its protection. Many endangered Florida species already suffer for lack of funds to the extent that even well known species such as the red-cockaded woodpecker and the manatee are losing habitat, and in the long run, will lose the fight with extinction if work on their behalf including not only research but tougher law enforcement and more aggressive recovery work at the state level is not increased.



Piping plover



Black-footed ferret

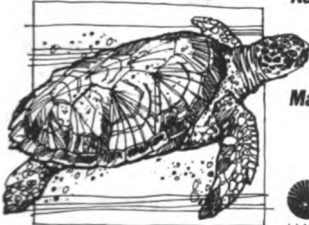
**Statement of the National Wildlife Federation before
the Subcommittee on Fish and Wildlife Conservation
and the Environment of the
House Committee on Merchant Marine and Fisheries on
Reauthorization of the Endangered Species Act**

H.R. 1467



Shell-necked penguin

**by
J. Scott Felerabend, Director
Fisheries and Wildlife Division
National Wildlife Federation**



Green sea turtle

March 17, 1987



Working for the Nature of Tomorrow.

NATIONAL WILDLIFE FEDERATION
1615 Sixteenth Street, N.W., Washington, D.C. 20036-2266

**SUMMARY OF THE STATEMENT OF
NATIONAL WILDLIFE FEDERATION
ON REAUTHORIZATION OF THE
ENDANGERED SPECIES ACT**

1. : reauthorization periods are needed for the ESA and the NWF supports the 5-year reauthorization proposed in H.R. 1467.
2. The NWF supports increased authorization levels for the ESA and requests an authorization of approximately \$63 million in FY 1988 to increase to approximately \$94 million in FY 1992.
3. Changes to the ESA at this time are unnecessary and so the NWF supports expeditious reauthorization of a straight bill without amendments.
 - Reauthorization is more frequently being used as a forum to debate issues that are "species-specific" and of local concern rather than to debate the broader purposes and constructs of the Act.
 - Frequent amendments to the ESA hamper its effective implementation, cause uncertainty, and contribute to misallocation of limited resources.
 - Additional amendments to the ESA will increase the administrative burden on federal agencies already pressed to their limits.
 - Congress can amend the ESA at any time.
4. Recovery of species listed as threatened and endangered must be improved and achieved in a more timely manner.
 - Establishing time limits for the preparation of final recovery plans by linking plan writing to listing may be necessary.
 - Recovery plans should include a more rigorous review of biological data.
 - Funding for recovery planning must not be tied to the taxonomic status of a species but instead must be allocated more equitably between all species listed as threatened and endangered.
5. The consultation process has worked well and so the NWF urges the Subcommittee to again reject attempts to weaken or limit consultations.

- Consultation has been well within the 90-day time limit and does not delay or impede development.
 - Formal and informal consultation appears to resolve conflict between development and listed species. Of almost 50,000 consultations completed to date, less than 350 (0.5%) have found jeopardy.
 - The FWS's "Windy Gap" policy to avoid jeopardy appears largely unchanged since the 1985 hearings. The NWF urges closer scrutiny of this policy by the Subcommittee and to seeking a permanent solution to the problem.
 - Agencies should routinely conduct post-opinion and post-construction surveys to ensure that species affected by an approved activity are recovering. These surveys also will be useful in future consultations.
6. The Section 10 experimental population amendments of 1982 have been of limited success in accelerating the recovery of threatened and endangered species. The NWF believes that, because the amendments have considerable potential for improving the rate at which listed species can be recovered and delisted, the reason for its limited use should be identified and --if appropriate-- corrected.

The species of plants and animals illustrated on the cover of this testimony are members of a life raft that Congress boldly launched 14 years ago. The green sea turtle, piping plover, small whorled pogonia, and black-footed ferret are but four of almost 1,000 species listed as threatened and endangered that are still afloat today because of the Endangered Species Act. To be certain, the seas have not always been calm nor the sailing smooth and we have lost a few passengers along the way. Nonetheless, the life raft has weathered these storms, it remains afloat, and is clear testament to the will and determination of the Congress and the American public that endangered species must be protected and preserved.

Today, the process of rebuilding and reprovisioning the life raft begins anew. There will be those seeking to give the vessel greater buoyancy and better stability for the going ahead, and there will be those who would like to see it drydocked indefinitely. Given the commitment of this Nation to endangered species, however, there can be no doubt that the Endangered Species Act will soon sail again. Of singular concern to the National Wildlife Federation (NWF) is that, whatever repairs might be performed, they be handled efficiently and expeditiously and that we set the Endangered Species Act out to sea again as quickly as possible. We are confident that, with the focus and support of this Subcommittee, this can be accomplished and the 100th Congress will be a highwater mark for endangered species.

Thank you for this opportunity to submit to the Subcommittee the views of the National Wildlife Federation on reauthorization of the Endangered Species Act of 1973, as

amended (ESA). The NWF is the world's largest not-for-profit conservation-education organization. We have over 4.6 million members and supporters throughout the United States and affiliated organizations in all 49 states, the Virgin Islands, and Puerto Rico.

The NWF has been a longstanding participant in the development and the effective implementation of the ESA. In fact, in 1956, fully ten years before enactment of the Nation's first endangered species law, the NWF's National Wildlife Week theme was "Save Endangered Species." Since 1936, when the NWF was founded, we have adopted more than ten resolutions promoting the protection and conservation of endangered species. Since 1970, the NWF has distributed over one million pieces of educational literature on endangered species and we have initiated numerous legislative and legal actions to promote the protection and recovery of endangered species. Our historical interest and commitment to protecting endangered species has never been stronger than today as we seek reauthorization of one of this Nation's premiere pieces of wildlife legislation.

THE NWF SUPPORTS LONGER REAUTHORIZATIONS OF THE ESA

Funding for the ESA has been reauthorized three times since its inception in 1973 (Figure 1). The original statute (P.L. 93-205) authorized appropriations to implement the Act for fiscal years 1974-1976, a "three year" bill. The first reauthorization (P.L. 94-325) in 1976 was a "two year" bill, authorizing appropriations for fiscal years 1977-1978. The second reauthorization (P.L. 95-632) in 1978 was a "four year" bill, authorizing appropriations for fiscal years 1979-1982. The third reauthorization (P.L. 97-304) was a

"three year" bill, authorizing appropriations for fiscal years 1983-1985. Although appropriations to implement the statute were not reauthorized in 1985, the House bill (H.R. 1027) again provided for a three-year reauthorization period.

In testimony presented before this Subcommittee on H.R. 1027 in March 1985, the NWF urged the Congress to extend the ESA for five, rather than three, years. We are, therefore, pleased to see that H.R. 1467 proposes to establish an authorization period for fiscal years 1988-1992, a period of five years. Equally encouraging is that the Senate reauthorization bill (S. 675) also proposes to reauthorize the ESA for five years. The NWF commends the Subcommittee for calling for a five-year reauthorization and it is a provision of H.R. 1467 we support.

THE NWF SUPPORTS INCREASED AUTHORIZATION LEVELS FOR THE ESA

The NWF has repeatedly urged the Congress to increase the authorizations and appropriations for endangered species. Our message has not changed. Against a backdrop of the many pressing needs of endangered species and the simple fact that extinctions are final, these budget requests pale in comparison to the budgets of so many other federal programs. It is no secret that dollars are the fuel that drive the federal engine. We are not asking for premium unleaded, just a full tank of regular so that the agencies' endangered species programs can operate at a level that, at worst, will slow extinctions, and, at best, will begin the long process of recovery for those species listed as threatened and endangered.

Working in concert with other national environmental and conservation organizations, the NWF has developed authorization levels for the ESA that mirror those contained in H.R. 1467 for FY 1988. Specifically, we are recommending an authorization of almost \$63 million for fiscal year 1988. The details for this request are contained in Figure 2.

We are proposing modest increases for fiscal years 1989-1992 that will culminate at a final 1992 authorization of almost \$94 million. These increases (Figure 2) will be necessary to keep pace with the increased workload for all endangered species programs in the years ahead.

THE NWF SUPPORTS EXPEDITIOUS REAUTHORIZATION OF A STRAIGHT BILL WITHOUT AMENDMENTS

Fourteen years of experience with the ESA has demonstrated that the legislation is fundamentally sound. Because H.R. 1467 does not seek amendment to the ESA, other than increased authorizations for five years, it can be characterized as a "clean and lean" bill. While NWF recognizes that parties on all sides of the issue are prepared to offer amendments to the ESA, we are at this time opposed to opening H.R. 1467 to the amendatory process.* This position may well draw criticism. However, we believe a straight reauthorization is justified for the following reasons.

*During the 1982 hearings before this Subcommittee, NWF testified in support of the need for additional provisions in the ESA to provide incremental increases in protection for plant and "candidate" species. We continue to support these proposals and would endorse these provisions if offered as amendments.

1. Changes to the ESA at this time are not necessary

Since the ESA was first enacted in 1973, numerous amendments, both minor and major, have been adopted. As illustrated in Figure 1, most of the amendments have been positive in nature and designed to promote the conservation and protection of endangered species. It is the opinion of the NWF that we have resolved the major problems and deficiencies with the ESA and we are, increasingly, losing sight of the original intent of the statute and are now preoccupied with "fine-tuning." The following example illuminates this point.

In recent years, debate over the broader issues and constructs of the Act (i.e., listing, recovery, consultation) has been supplanted with debate that is much narrower and focused. For the first time in the history of the ESA, the 99th Congress failed to reauthorize the Act. The reason: protracted debate and eventual stalemate over parochial issues that certain members of Congress perceived were problems. More precisely, two species, the Alabama flattened musk turtle and the Concho water snake (neither of which were even listed at the time of the hearings) were used to thwart the efforts of this Subcommittee and the whole of Congress in reauthorizing a solid and improved ESA. Whether these issues will resurface is not the point. Instead, our concern is that reauthorization will now be used as a forum to debate issues that are "species-specific", and of local significance

*Further evidence that ESA issues are trending towards "species-specific" came last Congress when it passed H.R. 4531 (P.L. 99-625), commonly referred to as the "Sea Otter Amendment." This legislation amended the ESA solely for the purpose of facilitating efforts in translocating the threatened California sea otter.

rather than address issues of national and international importance.

As shown in Figure 3, there are numerous issues and amendments that were raised during 1985 and that may again be raised during this reauthorization. Both "weakening" and "strengthening" amendments range widely in number, focus, and scope. While many of these amendments may be meritorious and would, to varying degrees, enhance the conservation and protection of endangered species, the NWF questions the wisdom of opening the door to what will likely be a flood of demands, debate, and --ultimately-- delay. For this reason, we embrace the Chairman's "clean and lean" bill and suggest that not entertaining amendments will significantly increase the likelihood of an expeditious and timely reauthorization of the ESA.

2. Frequent amendments to the ESA hamper effective implementation

As described above, the ESA has been subject to close scrutiny, extensive discussions, and major changes. While many of these revisions have had positive benefits for endangered species, amending the ESA so frequently has hampered effective implementation of the Act. The resulting frequent regulatory revisions have caused instability, uncertainty, ineffectiveness, and misallocation of limited resources within the endangered species program. Moreover, amending the Act so often does not allow time to evaluate how well the changes are working.

In testimony given before this Subcommittee during the 1985 hearings, the NWF documented how the frequency

of reauthorization of the ESA creates regulatory problems for the federal agencies responsible for implementing the Act. For example, Section 4 and Section 7 regulations for the ESA amendments of 10 November 1978 were not completed until February 1980, two months after additional amendments to these Sections were enacted into law. The U.S. Fish and Wildlife Service (FWS) then had less than two years' experience in implementing these regulations before Congress again began consideration of even more changes to the ESA. Regulations implementing the Section 10 and Section 4 amendments enacted on 13 October 1982 were made final only six months prior to the 1985 reauthorization hearings (27 August and 1 October 1984, respectively). Thus, although the major changes made in 1982 have been in place for only a short while, some individuals and organizations may be willing to charge that these improvements to the ESA are not working and that Congress needs to undertake still more revisions. This endless tinkering with the Act has kept the National Marine Fisheries Service (NMFS) and the FWS in a state of perpetual rulemaking. This clearly is not in the interest of endangered species protection or economic development.

3. Additional amendments to the ESA will increase the administrative burden on federal agencies already pressed to their limits

Another important consideration to adding yet another list of amendments to the ESA is that these amendments will impose new administrative requirements on the FWS and NMFS. The result of this might be a reallocation of already limited fiscal and FTE resources away from existing and perhaps more

worthwhile programs, such as listing and recovery. In the alternative, the agencies might elect simply to ignore their new responsibilities, something to which the NWF and other conservation organizations would almost assuredly object. The point to be made is that the cost of implementing and administering new amendments to the ESA may, at present, far outweigh the benefits they are intended to provide for threatened and endangered species. This is a situation that most will argue should be avoided.

4. Congress can amend the ESA at any time

Although arguably, now is the time to amend the ESA, nothing prohibits Congress from acting to amend the statute before 1992, the year in which the Act will again be considered for reauthorization. Indeed, there is ample precedent for amending the ESA outside of the reauthorization process. For example, in 1976, Congress amended the Act to provide an exemption for the use of whale parts by Eskimos (P.L. 94-359). In 1977, Congress again amended the Act (P.L. 95-212), this time to effect changes in the Section 6 grants-to-states program. Simply put, Congress can amend the ESA at any time to address major deficiencies, and to resolve potential problems as they arise.

ESA ISSUES OF CONCERN TO NWF

The NWF presently is not proposing amendments to the ESA.* This is not to suggest that we believe the Act is entirely satisfactory and cannot stand improvement. Indeed, there are at least three major areas of concern to which we would like to direct the attention of the Subcommittee during this reauthorization. These are recovery, consultation, and experimental populations. A close look by the NWF at these programs and how they are being implemented reveals there is considerable room for improvement. Below are our suggestions on how to improve these programs and ultimately to enhance the conservation and protection of endangered species.

1. Recovery and Recovery Planning

Listing species as threatened or endangered is an important component of the ESA. Equally important, and some may argue that it is even more important, is the recovery of species listed as threatened and endangered.

Indeed, the purpose of the ESA ultimately is to recover listed species to the point that they can be removed from the list, not to simply increase the inventory of listed species. To meet this goal, however, requires timely preparation and implementation of recovery plans. In addition to providing a working blueprint for recovery, these plans provide several ancillary, but important, benefits.

*For reasons discussed above, NWF is opposed to opening the reauthorization process to amendment. However, should the Subcommittee elect to entertain amendments, the NWF intends to participate in this process. At such time we may be prepared to offer our own amendments as well as providing the Subcommittee our position on amendments proposed by others.

- Assisting state and federal agencies in planning land management activities, prioritizing tasks, and justifying certain annual appropriations.
- Identifying important research needs for state and federal agencies as well as academic institutions.
- Stabilizing populations of threatened and endangered species considered to be "threshold" before they become critically endangered, thus reserving human and financial resources for more urgent needs.
- Providing authoritative and oftentimes unique scientific source documents for use by researchers and managers.

There are currently 422 species listed as threatened or endangered in the United States. There are an additional 506 species occurring outside of the U.S. also listed as threatened or endangered. According to the FWS, only five, or less 0.5%, of these species have recovered to the point that they have been removed from the list.* On the other side of the balance ledger FWS estimates that some 200 species of plants alone have gone extinct since 1974.

*These include the east coast population of the brown pelican, three species of birds from Palau, and the American alligator. Significantly, the recovery of the brown pelican is largely attributed to the elimination of the organo-chlorine DDT from the environment, and the recovery of the American alligator is primarily a response to increased harvest regulation enforcement and monitoring. In other words, neither recovery is attributable directly to the implementation of a sophisticated recovery plan.

Remarkably, recovery plans have been completed or implemented for less than two-thirds (243/422 or 58%) of the U.S.-listed species (Figure 4). Of those species without final plans (Figure 5), 83 (20%) have plans that are in preparation, and the remaining 96 (23%) species have no recovery action underway at all. Clearly, progress is not being made on the important task of recovering threatened and endangered species. Indeed, it is safe to say that we are losing ground each year as the number of species listed grows and the number of species recovered remains static. The following observations of the NWF are intended to stimulate discussion on how the current recovery program can be improved and enhanced.

a. the writing of recovery plans should be linked to listing

Establishing time limits for the preparation of final recovery plans may be necessary to ensure timely development and issuance. For example, both the American alligator and the Bachman's warbler have been listed for 20 years, yet neither of these species have a recovery plan. There are other examples of such unwarranted delay between listing and recovery plan development. For example, the Northern swift fox (listed in 1970), the jaguar (listed in 1972), the Utah prairie dog (listed in 1973), the Atlantic salt marsh snake (listed in 1977), and the desert tortoise (listed in 1980) all presently await development of their recovery plans.

According to the FWS, the average time between the listing of a species and the approval of its recovery plan is approximately three years. One way to expedite the development of recovery plans is to link the process with listing. For example, Congress could require FWS and NWS to complete the writing of the recovery plan for a species 18

months from the date of final listing. While such a requirement would not ensure that the plan was subsequently implemented, it would, at the very least, guarantee that recovery plans were developed within a reasonable time period after listing. This would serve to prevent an additional backlog of recovery plans accumulating as more species are listed.

b. recovery plans should include a more rigorous review of biological data

A recurring criticism of recovery plans by the scientific community is that the documents lack adequate biological information on which to structure management options. To be certain, biological data for many endangered species are often limited, forcing recovery team staff to operate at a handicap. Nonetheless, where possible, recovery plans should go beyond outlines of general population objectives and instead include detailed, site-specific management goals for the species.

c. funding for recovery planning must not be tied to taxonomic status

The Congress never intended to weigh the taxonomic stature of one species against another, but did want all species to be viewed as equals and as integral components of functional ecosystems. According to the 1982 Senate Report, "Preferential treatment for 'higher life forms', species of a higher taxonomic order, has no basis in the Act nor in these amendments" (Sen. Rep. 97-418 at p. 14).

Unfortunately, the recovery planning process of the FWS does not reflect such an even-handed approach. It instead emphasizes what have been referred to as "higher," more "glamorous" species. The statistics to support this

observation are revealing. In FY 1986, for example, 56% (\$6.3 m/\$11.3 m) of the FWS's recovery program dollars were allocated to less than 4% (9/243) of the species listed (Figure 6). The lion's share of these funds was dedicated to recovery efforts for the bald eagle, peregrine falcon, grizzly bear, California condor, sea turtles, black-footed ferret, whooping crane, California sea otter, Hawaiian monk seal, and Florida manatee. By contrast, little or no recovery money was expended on insects, mollusks, crustaceans, or plants listed as threatened or endangered. For example, on average, insect species each received \$11,000, mollusks \$12,410, and plants \$20,590, while fish received \$69,060, mammals \$173,360, and birds \$192,860.

While such disproportionate emphasis may seem to have merit aesthetically and anthropomorphically, scientifically and ecologically this approach to endangered species recovery is naive and shortsighted. Certainly, the costs to recover some species are much greater and resource-intensive than others. Such an example is the effort to recover the California condor from the brink of extinction. This initiative has required tremendous capital investments for research, monitoring and live-trapping, captive breeding, and land acquisition. However, such intensive "hands-on" management for endangered species is not always necessary.

Relatively small monetary investments for many of the species that traditionally have been neglected could yield large returns for these resources. For example, the cost of writing a recovery plan for the small whorled pogonia is estimated by the FWS to be \$1,000. Currently, so little is known about the distribution and population size of the plant that the major activities needed to initiate its recovery are simply monitoring and conducting habitat inventories to

determine the extent of its range. If, through these inventories, significant numbers of new populations are found, the species could be downlisted or even delisted.* Until this basic information is compiled, there simply is no justification for elaborate and expensive field and laboratory research.

Our concern is that FWS and NMFS need to allocate their resources for recovery more evenly among species listed as threatened and endangered. Doing this will bring credibility to their recovery efforts, and will make programs more biologically-balanced.

2. Consultation

Section 7(b) of the ESA establishes "consultation," a process to ensure that actions of any agency of the Federal Government do not jeopardize the continued existence of an endangered or threatened species or modify its critical habitat. This Section of the Act, which is the keystone to accommodating development projects and protection of listed species, has worked remarkably well. Time and again Congress has rejected proposals to dilute or even abandon consultation, largely because assertions made by its detractors are hollow. We ask the Subcommittee once again to stand fast on this issue.

*This is what happened with the snail darter in Tennessee. Scientists conducting surveys of suitable habitat discovered additional populations of the endangered fish, which ultimately allowed the FWS to reclassify the species as threatened.

a. consultation does not delay or impede development

According to the FWS, the number of Section 7 consultations conducted between FY 1979 and FY 1986 increased four-fold (Figure 7). Most (91.9%) of these consultations were informal rather than formal (8.1%). The dramatic rise in the total number of consultations during this period is likely due to greater numbers of U.S.-listed species, which grew from 223 in FY 1978 to 409 in FY 1986.

Despite a steady increase in the number of consultations, the FWS continues to process them in a timely manner. In fact, as illustrated in Figure 8, the FWS has become increasingly efficient in completing consultation and, with a single exception in FY 1979 for jeopardy opinions, the agency has always been well within its 90-day statutory time limit. For example, in FY 1984 (the most current data available to NWF), 11 jeopardy opinions took an average of 21 days to complete, and 16 no jeopardy opinions took an average of 41 days to complete. Clearly, consultation does not delay development or construction.

b. jeopardy opinions

Of 48,538 biological opinions issued to date, only 325 (one half of 1%) have concluded jeopardy (Figure 9). Even more remarkable is that only 15 (less than 5%) of the projects for which jeopardy opinions were issued between FY 1979 and FY 1984 (the most current data available to NWF) resulted in cancellation or withdrawal of the project (Figure 10). Significantly, more than one-third of these projects were cancelled because of economic problems, not the ESA.

While these findings are encouraging and suggest that conflicts between development and endangered species protection are being addressed, they also give cause to speculate whether or not the FWS is enforcing Section 7(b) of the ESA adequately. Indeed, issuance of few jeopardy opinions and a complete lack of conflict with development implies that FWS may be more interested in compromising with project sponsors than in enforcing the ESA vigorously, and occasionally saying "no".

Two years ago, the NWF provided this Subcommittee with a comprehensive overview of the FWS's "Windy Gap" approach to avoiding jeopardy for threatened and endangered species of fish found in the western United States. In simplest terms, under the Windy Gap policy, the FWS agreed to find no jeopardy for a species so long as the project sponsor underwrote research to evaluate impacts of the project on the species. During the 1985 House hearings, the NWF vociferously opposed this policy, arguing that it contravened the very essence of the Act. Apparently, our remarks have had little influence on how the agency evaluates jeopardy for water projects. For evidence, one need look no further than the Stacy Dam and Reservoir Project in Texas and how the FWS is presently handling this issue. Apparently, it's "business as usual" at the FWS.

The FWS's Windy Gap policy, which amounts to selling away jeopardy opinions to project sponsors, must be curtailed. The National Wildlife Federation invites the Subcommittee to join us in exploring and seeking a permanent solution to this problem.

c. agencies should routinely conduct post-opinion and post-construction surveys

To the surprise of the NWF, there is little or no effort to evaluate routinely, and in a standardized fashion, the status of a species after the biological opinion for a project has been rendered and the project completed. This is true not only for projects receiving a no jeopardy opinion, but for those receiving a jeopardy opinion as well. The result, then, is that FWS and NMFS decisionmakers are operating without the benefit of knowing how well their "reasonable and prudent alternatives" are operating. This type of baseline information should be routinely compiled and evaluated by the FWS, NMFS, or the project sponsor, for two important reasons.

First, it is critical to know what impacts the project --either as originally designed or as modified through consultation-- have had on the affected species. For example, is the species stable, increasing in number, trending downward, or even approaching extinction? If the project is in fact adversely affecting the recovery of species, then some form of intervention will be required.

Second, compiling baseline data on how well certain project modifications work will be useful in future consultations. For example, the Environmental Protection Agency may find that applying pesticides to fields at certain times of the day will avoid jeopardy to endangered raptors foraging on the area. Being able to draw on this experience will be invaluable in guiding future decisions on other, similar pesticide consultations. By the same token, if it is learned that adjusting water flows below a dam site does not avoid jeopardy to an endangered mussel, then sponsors of

similar projects, either proposed or already completed, must be made aware of this problem.

3. Experimental Populations

In 1982, Congress amended Section 10 of the ESA to encourage the establishment of "experimental populations." The purpose of the amendment was to "give greater flexibility to the Secretary in the treatment of populations of endangered species that are purposely introduced into areas outside their current range to further the conservation of the species" (Sen. Rep. No. 97-418 at p. 7). By relaxing certain restrictions otherwise applicable to listed species*, it was hoped that the conservation and recovery of endangered species would be promoted. However, in the five years since these amendments were adopted, only four species have been reintroduced as experimental populations.** This suggests that the original expectations for accelerated and more

*All experimental populations are to be treated as if they are "threatened," and, for the purposes of Section 7, "nonessential" experimental populations (i.e., those not occurring on lands of the National Wildlife Refuge System or the National Park Service and are not necessary for the continued existence of the species) would be treated as species "proposed" to be listed.

**These four species include the Delmarva fox squirrel in Delaware (49 Fed. Reg. at 36418; 13 Sept. 1984), the red wolf in North Carolina (51 Fed. Reg. at 41790; 19 Nov. 1986), and the Colorado squawfish and the woundfin in the Upper Colorado Basin (50 Fed. Reg. at 30188; 24 July 1985). The FWS also is considering reintroduction of six additional species as experimental populations. These include the California sea otter, the watercress darter, the smoky madtom, the Lahatan cutthroat trout, the Guam rail, and a species of crawfish. Except for the California sea otter, the proposals to establish these experimental populations are still in draft form. The proposal to translocate and designate an experimental population of California sea otters was published 15 August 1986 (51 Fed. Reg. at 29362).

aggressive reintroductions under the amended Section 10 provision have not been met.

While the 1982 amendments were meant to facilitate reintroductions of endangered species, they did not require that all reintroduced populations be designated as experimental. In fact, the number of species that have been reintroduced as endangered outnumber those reintroduced as experimental.* Because reintroductions of species as endangered retain full ESA protection, this option for recovery should be utilized wherever possible. In many instances, however, reintroductions cannot occur unless the additional "management flexibility" provided under Section 10 can be assured. In the estimate of the NWF, the apparently underutilized experimental population component of the ESA warrants closer scrutiny.

Given the large number of species listed as threatened and endangered, why has the experimental population provision not been more widely and frequently used? There are several reasons. First, many species are listed for which the scientific and technical expertise needed to ensure a successful reintroduction (i.e., captive propagation and translocation methodologies) are lacking. Reintroduction of these species obviously is inappropriate.

*Examples of endangered species reintroduced into the wild without the Section 10 provision include freshwater mussels (Alabama), the watercress darter (Alabama), the masked bobwhite quail (New Mexico), the round-leaved birch (Virginia), and Kemp's ridley turtle (Texas).

Second, the cost to reintroduce experimental populations may preclude its more frequent use. For example, the FWS estimates that the cost to reintroduce the red wolf will be approximately \$135,000 for FY 1987-1988 with a total cost over the five-year program period of \$375,000 to \$400,000.

Third, an experimental population carries less protection (i.e., it is treated as a threatened species) than a population reintroduced as endangered. Experimental population reintroductions are therefore likely to be met with strong resistance by members of the public who oppose the taking of any threatened or endangered species.

Fourth, the "historic range" for the species to be reintroduced often has been poorly delineated or perhaps not delineated at all. A case in point involves the birdwing pearly mussel, the cumberland monkeyface pearly mussel, and the dromedary pearly mussel. It has been suggested to reintroduce these three species to a site that occurs along a stretch of river between two known historic ranges. Until scientists confirm that the proposed release site was previously occupied by these species, reintroduction will not occur. The FWS and the states are reluctant to reintroduce species into areas of the country for which naturally-occurring "checks and balances" may be lacking. Additionally, the experimental population must be reintroduced into habitat that is geographically isolated from other nonexperimental populations of the same species. In some instances these areas may not exist and in others they have yet to be defined.

Finally, Congress recognized that, if the Section 10 amendment was to offer greater opportunity to recover species, then full cooperation of the states was essential.

As illustrated above, however, the states have been reluctant to participate in experimental population reintroduction programs. There are two primary reasons for this.

First, although the proposal to establish an experimental population is initiated and approved at the federal level, the fiscal, administrative, management, and enforcement responsibilities of implementing the program ultimately are borne by the state. This alone is usually reason enough for states to balk at reintroduction programs. Second, and perhaps even more important, states and the private sector fear that traditional uses of private and public lands (i.e., real estate development, recreation, and habitat management) will be constrained, if not completely precluded, by reintroduction programs. For example, the state wildlife agencies in Tennessee and Virginia have been hesitant to reintroduce the Nashville crayfish and the yellowfin madtom because of potential management restrictions to be imposed on the agencies. Both reintroductions remain in abeyance and it is uncertain when, if ever, they will be formally proposed.

The NWF believes that the Section 10 experimental population provision has considerable potential for improving the rate at which threatened and endangered species can be recovered and ultimately delisted. We also believe that this opportunity, for whatever reason, is being overlooked. If we can identify precisely why the experimental population provision has not been more widely used, then perhaps steps to remedy this situation should be taken. Obviously, if the problem is primarily budgetary or technical in nature, then corrective legislation is unnecessary. However, if the problem is seated in the language of Section 10, then corrective legislation may be appropriate.

FIGURES

Figure 1. Summary of Endangered Species Act Amendments Since 1973

The Endangered Species Act of 1973: P.L. 93-205

- Authorized listing and conservation of plants
- Established the threatened species category
- Provided protection for species and their habitat through the
 1. designation of critical habitat for endangered and threatened species.
 2. writing of recovery plans for all endangered and threatened species
 3. elimination of restrictions on expenditures of dollars from the Land and Water Conservation Fund.
 4. prohibition of taking endangered and threatened species

1976 Amendment: P.L. 94-325

- Increased and extended the authorization and appropriations

1976 Amendment: P.L. 94-359

- Provided an exemption for Eskimo use of whale parts; clarified ESA enforcement procedures

1977 Amendment: P.L. 95-212

- Extended the authorization for Section 6 grants to states

1978 Amendments: P.L. 95-632

- Reauthorized the Act for four years

Established the Endangered Species Interagency Committee to:

1. review Federal agency actions " that would jeopardize the continued existence of threatened for endangered species or destroy critical habitat".
 2. determine whether Federal actions should be exempted.
- Required the designation of critical habitat at the time of listing.
 - Indirectly introduced economic considerations by requiring the secretary to consider the economic impact of designating critical habitat.

1979 Amendments: P.L. 96-159

- Required that "each agency shall use the best scientific and commercial data available" in fulfilling its duty to prevent jeopardy to listed species.

1982 Amendments: P.L. 97-304 (by Section)

- Reauthorized the Act for three years

Section 2: Experimental Populations

2(a)(3) Defined experimental populations as "populations released outside the current range of the species to further its conservation". Noted that the loss of an experimental population should not be likely to appreciably reduce the viability of the population in the wild.

2(b)(3) Set forth restrictions applicable to experimental populations as if they were threatened species.

2(b)(3) Subsection 10(a) Clarified the authority of the Secretary to issue permits for actions that result in the incidental taking of listed species.

Section 3: Cooperation with the States

Increased the maximum Federal share of grants from 66.66% to 75% for single state projects and 75% to 90% for multi-state projects. This change made the ESA consistent with Federal Aid in Fish and Wildlife Restoration Programs.

Section 4: Listing Process

Re-emphasized that listing or delisting decisions should be made solely on the basis of biological considerations, to provide protection to all species in danger of extinction, regardless of economic considerations. Noted that preferential treatment for higher life forms has no basis in the Act, thereby providing equal legal protection for all life forms.

4(a)(2) Required the Secretary to designate critical habitat at the same time as listing to the maximum extent possible. Required the Secretary to list species for which sufficient information is available within one year (instead of the previous two year deadline) after proposed listing.

4(a)(3) Reduced the time periods for rulemaking, public meetings, and hearings, and publications. Public comment periods were limited to 60 days and the request of hearings to 45 days. The new law also allowed 90 days for status review and 12 months for the Secretary to publish an opinion. Prior to this amendment, there had been no deadline for petition of review, and petitions often continued indefinitely, sometimes for many years.

4(b) Added a civil standing provision, giving citizens the right to sue the Secretary in the event that he fails to perform his required activities and duties. Previously there had been no avenue of recourse.

4(a)(1) Clarified the difference between illegal hunting and sporting with reference to determining potential causes for species endangerment.

Section 5: Exemption Process

Removed the terminology "irresolvable conflicts" because "all conflicts are resolvable by accommodation, exemption, or otherwise".

Reduced the time to determine a applicant's eligibility from 60 days to 20 days, the time for the Secretary to make a report to the Endangered Species Committee from 180 to 150 days, and the time during which the Committee makes a decision from 90 to 30 days.

No longer required the Endangered Species Committee member's representative to be a presidential appointee; rather, status of a Federal officeholder was sufficient.

Section 6: Consultation Process

Allowed the process of consultation to be extended from 90 days to a longer period by mutual agreement of the Secretary and the Federal Agency.

Section 7: Relationship between Sections 7 and 9 (Enforcement)

Required the secretary to specify the allowable limits of incidental taking where possible, yet emphasized that such takings should be limited. Incidental taking includes parts, products, eggs, and offspring).

Section 10: Miscellaneous

Re-emphasized that the U.S. must meet international CITES obligations.

Recognized states' and regional interest with respect to water allocation, and suggested federal/state/local cooperation.

Section 11: Removal of Plants

Extended the prohibition of taking endangered species to include plants.

1985 Amendment: P.L. 625

- Provided the allowance to translocate sea otters in California.

Figure 2. National Wildlife Federation budget Recommendations for the Endangered Species Act

(All \$ amounts in millions)

	<u>FY88</u>	<u>FY89</u>	<u>FY90</u>	<u>FY91</u>	<u>FY92</u>
<u>Department of Interior</u>					
Listing	7.00	7.50	8.00	8.50	9.00
Law enforcement	9.50	9.50	10.00	10.00	10.50
Permit	0.96	0.96	1.20	1.20	1.30
Consultation	4.00	5.00	6.00	6.50	7.00
Recovery	12.20	14.00	17.00	20.00	23.20
Research and Development	5.00	5.00	6.00	6.00	7.00
Fisheries, Hatchery operations - ESA	<u>0.16</u>	<u>0.16</u>	<u>0.20</u>	<u>0.20</u>	<u>0.20</u>
<u>Subtotal</u>	38.82	42.12	48.40	52.40	58.20
<u>Department of Commerce</u>	5.75	6.25	6.25	6.75	6.75
<u>Department of Agriculture</u>	2.20	2.40	2.40	2.60	2.60
Cooperation with states	15.00	15.00	19.00	23.00	25.00
Exemptions	0.60	0.60	0.70	0.70	0.80
Convention implementation	<u>0.40</u>	<u>0.40</u>	<u>0.40</u>	<u>0.50</u>	<u>0.50</u>
<u>Subtotal</u>	<u>23.95</u>	<u>24.65</u>	<u>28.75</u>	<u>33.55</u>	<u>35.65</u>
<u>Grand Total</u>	62.77	66.77	77.15	85.95	93.85

Note: Estimates are tabulated in constant 1988 dollars.
 Appropriations will need to be adjusted for inflation.

Figure 3. Issues of consideration for the 1986 & 1987 reauthorization of the Endangered Species

<u>Section</u>	<u>Purpose</u>
4(c): Listing	<p>Candidate Species Monitoring: require the Secretary to monitor the status of proposed species and use emergency listing authority if necessary.</p> <p>Relisting: require the Secretary to relist delisted species within one year after receipt of a petition providing substantial evidence that the species' population or habitat is less than 80% of the level it was when the species was delisted.</p>
4(f): Recovery	<p>Timetables: require that a recovery plan be written within one year of listing the species.</p> <p>Cost estimates: require the inclusion of cost estimates for tasks recommended in recovery plans.</p>
6(d): State Cooperation	<p>Multi-year Budgets: recommend that federal/state projects related to endangered species management be developed with multi-year budgets.</p>
7: Interagency cooperation	<p>Increase Cooperative Planning: increase activity programming on a cooperative interactive level, especially with the Forest Service and Bureau of Land Management; all federal agencies to review and revise their conservation programs with respect to endangered species management priorities.</p> <p>International Consultations: limit or cease incidental taking of a species if its recovery is impaired; discontinue or do not allow approval of development projects or other activities overseas that would not be allowed domestically.</p> <p>Consultations regarding biological opinion on Outer Continental Shelf leasing program.</p> <p>Restrictions on stream depletion due to endangered fish in rivers; interstate</p>

compacts: property rights.

Flow maintenance on Colorado and South Platt rivers; balance of human and species rights; less protection of subspecies and more emphasis on artificial propagation as a means of protecting endangered species.

Lengthy, case by case examinations for Section 7 consultations regarding dam construction; interstate compacts.

Water development and property rights.

Short reauthorization period; western water rights.

Irrigation needs; Juniper-Cross Mt. hydroelectric project in Yampa and Taylor Draw Reservoir on the White River; expense and delays of consultation process, and up-front payment for fish and Wildlife Service research needs as a condition of no-jeopardy.

Water development and management conflicts; two-year reauthorization to allow time for working groups to propose administrative solutions.

Exploration of oil and gas in the Beaufort Sea with respect to Bowhead whales; drilling restrictions during the fall migrations; seismic exploration restrictions and lease sale deletions.

9: Prohibited Acts

Lack of regulations regarding experimental populations and establishment of "non-essential populations"; supportive of two year reauthorization.

"burdensome, cumbersome, and inappropriate" aspects of incidental taking permits.

Incidental taking

Rights to collect or take plants on non-federal lands.

Devastation of fisheries harvest and mariculture due to sea otter

- translocation throughout the California coast.
- Limitations on fishing due to otter range and other drownings.
- Destruction of abalone, sea urchin, and spiny lobster industry due to sea otters.
- Sea otter translocation to San Nicholas Island with respect to oil and gas development; restrictions on leasing, exploration and development in the Santa Maria Basin.
- 10: Exceptions & permits
- Limitation: allow incidental take or other permits only after the Secretary has fulfilled obligations for recovery and planning of the species affected.
- Scientific Research permits: do not issue permits that involve lethal taking unless they contribute directly to the recovery of the species (current wording stipulates that lethal taking must not "disadvantage" the species.)
- Rights to breed or display exotic animals.
- Raptor "exemption" for falconry and captive propagation.
- Importation of farmed turtle products.
- Religious freedom; need to collect eagle feathers for religious ceremonies.
- Sport hunters rights; regulated sport hunting of threatened species (gray wolves in Minnesota, Canada geese in Alaska).
- Rights of sportsmen to hunt, fish, or trap; hunting restrictions on threatened species such as bears, alligators, and wolves.
- Grizzly and coyote predation on flocks.
- ESA's disproportionate impact on the agricultural community because many endangered species are present on private land in rural areas; threats of

bears and wolves to livestock; problems of controlling prairie dogs in black-footed ferret habitat.

11: Penalties & Enforcement

Recovery Fund: shift the economic costs of recovery to those who incur damage to the species; provide the Secretary and private citizens power to sue for damages.

Funding

Mitigation Fund: establish a fund for resolution of emergency situations threatening species (eg. a localized catastrophe); set aside a minimum of \$5 million; where deliberate or negligent activity is the cause of threat, the Secretary may bring suit.

Plants

Plant Amendment: increase the protection provided to plants by prohibiting taking, (taking = harming, killing, or collecting).

Plant Taking Amendment: prohibit "removing or reducing to possession, cutting up, or destroying" a plant without a permit (federal lands) or the consent landowner (private lands).

Enforcement Amendment: establish an APHIS (Animal and Plant Health Inspection Service) investigation unit to enforce regulations restricting export, import and interstate trade of endangered or threatened plants.

Figure 4. Endangered and threatened species with approved recovery plans

Mammals (23 species)

Big-eared bats
 Ozark big-eared bat
 Virginia big-eared bat
 Black-footed ferret
 Columbian white-tailed deer
 Delmarva Peninsula fox squirrel
 Eastern cougar
 Eastern timber wolf
 Florida panther
 Gray bat
 Grizzly bear
 Hawaiian monk seal
 Indiana bat
 Key deer
 Mexican wolf
 Morro Bay kangaroo rat
 Northern Rocky Mountain wolf
 Red wolf
 Salt marsh harvest mouse
 San Joaquin kit fox
 Sonoran pronghorn
 Southern sea otter
 West Indian manatee
 Mainland U.S. population Plan
 Puerto Rico Population Plan
 Woodland caribou

Birds (55 species)

Aleutian Canada goose
 Attwater's greater prairie chicken
 Bald eagle
 Chesapeake Bay Region Plan
 Southwestern Population Plan
 Pacific States Population Plan
 Northern States Plan
 Southeastern States Plan
 California brown pelican
 California clapper rail
 California condor
 California least tern
 Cape Sable seaside sparrow

Channel Islands species
 San Clemente loggerhead shrike
 San Clemente sage sparrow
 Dusky seaside sparrow

 Eastern brown pelican
 Mainland U.S. Population Plan
 Puerto Rico and Virgin Islands Population Plan
 Everglade snail kite
 Hawaiian crow or 'alala
 Hawaiian forest birds
 'Akaipola'au
 Hawai'i'i akepa
 Hawai'i'i creeper
 'O'u
 Hawaiian hawk
 Hawaiian seabirds
 Hawaiian dark-rumped petrel
 Newell's Townsend's shearwater
 Hawaiian waterbirds
 Hawaiian coot
 Hawaiian duck or koloa
 Hawaiian gallinule
 Hawaiian stilt
 Kaua'i forest birds
 Kaua'i 'akialoa
 Kaua'i 'o'o
 Large Kaua'i thrush
 Nuku-pu'u
 'O'u
 Small Kaua'i thrush
 Kirtland's warbler
 Laysan duck
 Light-footed clapper rail
 Masked bobwhite
 Maui-Moloka'i forest birds
 Crested honeycreeper
 Maui 'akepa
 Maui parrotbill
 Moloka'i thrush
 Moloka'i creeper
 Nuku-pu'u
 Po'ouli
 Mississippi sandhill crane
 Nene or Hawaiian goose
 Northwestern Hawaiian Islands passerine birds
 Laysan finch
 Nihoa finch
 Nihoa millerbird

Palila
 Peregrine falcon
 Rocky Mountain/Southwest plan
 Eastern Plan
 Alaska Population Plan
 Pacific Plan
 Puerto Rican plain pigeon
 Puerto Rican parrot
 Puerto Rican whip-poor-will
 Red-cockaded woodpecker
 Whooping crane
 Wood stork
 Yellow-shouldered blackbird
 Yuma clapper rail

Reptiles (21 species)

American crocodile
 Blunt-nosed leopard lizard
 Culebra Island giant anole
 Coachella Valley fringe-toed lizard
 Eastern Indigo snake
 Island night lizard (Channel Islands Plan)
 Leatherback sea turtle
 Marine turtles
 Green sea turtle
 Hawksbill sea turtle
 Kemp's Ridley sea turtle
 Leatherback sea turtle
 Loggerhead sea turtle
 Olive Ridley sea turtle
 Mona boa
 Mona ground iguana
 Monito gecko
 New Mexico ridge-nosed rattlesnake
 Plymouth red-bellied turtle
 Puerto Rico boa
 St. Croix ground lizard
 San Francisco garter snake
 Virgin Islands tree boa

Amphibians (6 species)

Desert slender salamander
 Golden coqui
 Houston toad
 Red Hills salamander
 San Marcos salamander
 (San Marcos River Plan)

Santa Cruz long-toed salamander

Fishes (43 species)

Alabama cavefish
 Amber darter
 Arizona trout
 Bayou darter
 Big Bend gambusia
 Blue pike (now extinct)
 Bonytail chub
 Chihuahua chub
 Clear creek gambusia
 Colorado River squawfish
 Comanche Springs pupfish
 Conasauga logperch
 Cui-ui
 Devil's Hole pupfish
 Gila trout
 Greenback cutthroat trout
 Humpback chub
 Kendall Warm Springs Dace
 Leon Springs pupfish
 Leopard darter
 Maryland darter
 Moapa dace
 Mohave tui chub
 Okaloosa darter
 Owens River pupfish
 Pahranaqat roundtail chub
 Pahrump killifish
 Paiute cutthroat trout
 Pecos gambusia
 San Marcos River Species
 Fountain darter
 San Marcos gambusia
 Slackwater darter
 Slender chub
 Smoky madtom
 Snail darter
 Spotfin chub
 Topminnows
 Gila topminnow
 Yaqui topminnow
 Unarmored threespine stickleback
 Warm Springs pupfish
 Watercress darter
 Woundfin
 Yellowfin madtom

Snails (7 species)

Chittenango ovate amber snail
 Flat-spired three-toothed snail
 Iowa Pleistocene snail
 Noonday snail
 Painted snake coiled forest snail
 Stock Island tree snail
 Virginia fringed mountain snail

Clams (21 species)

Alabama lamp pearly mussel
 Appalachian monkeyface pearly mussel
 Birdwing pearly mussel
 Cumberland bean pearly mussel
 Cumberland monkeyface pearly mussel
 Curtis' pearly mussel
 Dromedary pearly mussel
 Fat pocketbook pearly mussel
 Fine-rayed pigtoe pearly mussel
 Green-blossom pearly mussel
 Higgins' eye pearly mussel
 Orange-footed pearly mussel
 Pale lilliput pearly mussel
 Rough pigtoe pearly mussel
 Shiny pigtoe pearly mussel
 Tan riffle shell mussel
 Tubercled-blossom pearly mussel
 Turgid-blossom pearly mussel
 White wartyback pearly mussel
 Yellow-blossom pearly mussel

Crustaceans (1 species)

Soccero isopod

Insects (12 species)

California butterflies
 San Bruno elfin butterfly
 Mission blue butterfly
 Delta green ground beetle
 El Segundo blue butterfly
 Kern primrose sphinx moth
 Large's metalmark butterfly
 (Antioch Dune Plan)
 Lotis blue butterfly

Oregon silverspot butterfly
 Palos Verdes blue butterfly
 Schaus swallowtail butterfly
 Smith's blue butterfly
 Valley elderberry longhorn beetle

Plants (54 species)

Antioch Dunes plants
 Contra Costa wallflower
 Antioch Dunes evening primrose
 Brady pincushion cactus
 Bunched arrowhead
 Channel Islands species
 San Clemente Island broom
 San Clemente Island bush-mallow
 San Clemente Island Indian paintbrush
 San Clemente Island larkspur
 Chapman rhododendron
 Clay phacelia
 Davis' green pitatya
 Dwarf bear-poppy
 Eureka Valley Dunes plants
 Eureka Valley dunegrass
 Eureka Valley evening-primrose
 Florida torreyia
 Furbish lousewort
 Green pitcher plant
 Gypsum wild buckwheat
 Hairy rattleweed
 Harper's beauty
 Hawaiian vetch
 Key tree-cactus
 Knowlton cactus
 Kuenzler hedgehog cactus
 Lee pincushion cactus
 MacFarlane's four-o'clock
 McDonald's rock-cress
 McKittrick pennyroyal
 Mesa Verde cactus
 Mountain golden heather
 Navasota ladies'-tresses
 Nellie cory cactus
 Nichol's Turk's head cactus
 North Park phacelia
 Northern monkshood
 Peebles Navajo cactus
 Persistent trillium
 Raven's manzanita

Robbins' cinquefoil
 Salt marsh bird's-beak
 San Diego mesa mint
 Santa Barbara Island liveforever
 Siler pincushion cactus
 Small whorled pogonia
 Sneed pincushion cactus
 Solano grass
 Spineless hedgehog cactus
 Tennessee purple coneflower
 Texas poppy mallow
 Texas wild-rice (San Marcos River Plan)
 Todsens' pennyroyal
 Truckee barberry
 Virginia round-leaf birch
 Wright fishhook cactus

(More than one species are covered by some plans, and some species have several plans covering different parts of their ranges.)

Figure 5. Species with Recovery Plans in Preparation

Birds (8 species)

Eagle, bald
 Guam forest birds
 Gallinule, Mariana
 Swiftlet, Vanikoro
 Tern, interior least
 Plover, piping
 Pelican, Caribbean brown
 Stork, wood

Clams (2 species)

Mussel, Curtis eye pearly
 Mussel, Tar River spiny

Crustaceans (1 species)

Cave shrimp, Kentucky

Fishes (6 species)

Chub, Borax Lake
 Chub, Pahrnagat roundtail
 Cavefish, Ozark
 Logperch, Conasunga
 Darter, amber
 Spinedace, Big Springs

Insects (1 species)

Butterfly, El Segundo Blue

Mammals (6 species)

Bats, Guam fruit
 Manatee
 Mice, Perdido Key Beach
 Cottonmouse and Key Largo woodrat
 Prairie Dog, Utah

Reptiles (5 species)

Hillebrandii, Gouania
 Boa, Puerto Rican
 Gecko, Monito
 Boa, Virgin Islands
 Tortoise, Desert

Plants (21 species)

Ash meadows species
 Fiddleneck, large flowered

Figure 5. Species with Recovery Plans in Preparation

Wire-lettuce, Malheur
Trout lily, Minnesota
Bladderwort, Missouri
Clover, prairiebrush
Torreya, Florida
Cactus, Key tree
Mint, Lakela's
Goldenrod, Blue Ridge
Goldenrod, Shorts
Aster, Ruth's golden
Goetzea, beautiful
Boxwood, Vahl's
Phacelia, North Park
Cactus, purple-spined hedgehog
Poppy, dwarf bear
Cactus, spineless hedgehog
Milk-vetch, Rydberg
Cactus, Wright fishhook
Cactus, Unita Basin hookless

Fig. 6. Recovery Planning Costs (in \$1000's) -Sp. W/ Plans

Species	Recovery plan revision	Implementation
Birds		
Tern, California Least	1.00	0.00
Falila	1.00	0.00
Masked Bobwhite	0.00	45.60
Crane, Whooping	0.00	679.80
Bald eagle	0.00	265.20
Eagle, bald (North pop)	1.50	0.00
Attwater's prairie chicken	0.00	19.20
Yuma clapper rail	0.00	35.00
Warbler, Kirtland's	0.00	523.30
Whip-poor-will, Puerto Rican	0.00	15.00
Pelican, California brown	0.00	19.00
Crane, Mississippi sandhill	0.00	49.50
Pigeon, Puerto Rican plain	0.00	10.00
Blackbird, yellow-shouldered	0.00	70.00
Parrot, Puerto Rican	0.00	415.50
Falcon, peregrine	1.00	584.00
Falcon, American peregrine (SW pop)	6.00	0.00
Falcon, peregrine (Ak pop)	1.75	0.00
Canada goose, Aleutian	1.75	583.00
Kite, Florida Everglade	1.00	0.00
* Cui-oi		155.00
* Crow, Hawaiian		257.00
* Hawaiian forestbirds		660.10
* Hawaiian waterbirds		40.50
* Mallard, Mariana		56.00
* Rail, Guam		108.40
* Rail, Light-footed		20.00
* Shrike, San Clemente Loggerhead		10.00
* Vireo, Least Bell's		30.00
Condor, California		1134.70
Average cost - birds	0.75	192.86
Clams		
Higgin's eye mussel	1.50	0.00
Mussels (6 spp yearly)	0.00	86.90
Average cost - clams	0.21	12.41
Fishes		
Cavefish, Alabama	1.10	0.00
Chub, bonytail	1.00	0.00
Chub, humpback	2.00	0.00
Darter, watercress	1.10	0.00
Madtom, Smoky	1.00	0.00
Squawfish, Colorado	2.00	435.60 (3 spp. CO fish)
Stickleback, Unarmed three-spined	1.00	0.00
Trout, greenback cutthroat	2.00	0.00
* Darter, Maryland		27.8
* Dace, Moapa		71.8
* Three Desert fish		277.00
* Yaqui fish		16.50
Average cost - fish	1.40	69.06
Mammals		
Bat, Indiana	1.50	0.00
Bat, gray	1.50	0.00
Bats (six spp)	0.00	222.30
Bear, grizzly	0.00	458.00

Fig. 6. Recovery Planning Costs (in \$1000's) -Sp. W/ Plans

Ferret, black-footed	2.00	654.00
Manatee, West Indian	0.00	355.60
Otter, southern sea	1.00	834.90
Panther, Florida	1.00	0.00
Squirrel, Delmarva fox	1.00	0.00
Wolf, Eastern timber	1.50	314.30
Wolf, Mexican	0.00	5.50
Wolf, Northern Rocky Mt.	5.00	0.00
Wolf, red	0.00	29.50
* Caribou, Woodland		264.00
* Panther, Florida		240
* Ooelot		33.00
* Rat, Morro Bay kangaroo		34
* Squirrel, Delmarva fox		11
* Deer, Columbia white-tailed		35
* Fox, San Joaquin kit		29
* Hawaiian Ecosystem (Mongoose)		120.5
Average cost - mammals	1.12	173.36
<u>Plants</u>		
Cactus, Peebles Navajo	0.00	7.80
Cactus, Knowlton hedgehog	0.00	15.00
Cinquefoil, robbin's	0.00	5.00
* Antioch Dunes (2 spp)		10.00
* Bunched arrowhead		61
* Furbish lousewort		12.00
* MacFarlane's four-o'clock		10.70
* Mountain golden heather		1
* Small Whorled Pogonia		1.00
* Virginia round-leafed birch		25.00
* Green pitcher plant		57.40
Average cost -plants	0.00	20.59
<u>Reptiles</u>		
Lizard, blunt-nosed leopard	1.00	0.00
Salamander, Santa Cruz long-toed	1.00	0.00
Turtles, all sea (6 spp)	0.00	555.00
* Turtle, Illinois mud		5.00
* Alligator, American		2
Average cost -reptiles	0.67	56.00
<u>Insects</u>		
* Butterfly, Oregon silverspot		17.00
* Butterfly, Smith's blue		5.00
Average cost - insects		11.00

*species for which plans have been written
but recovery efforts are being conducted

Figure 7. Consultations

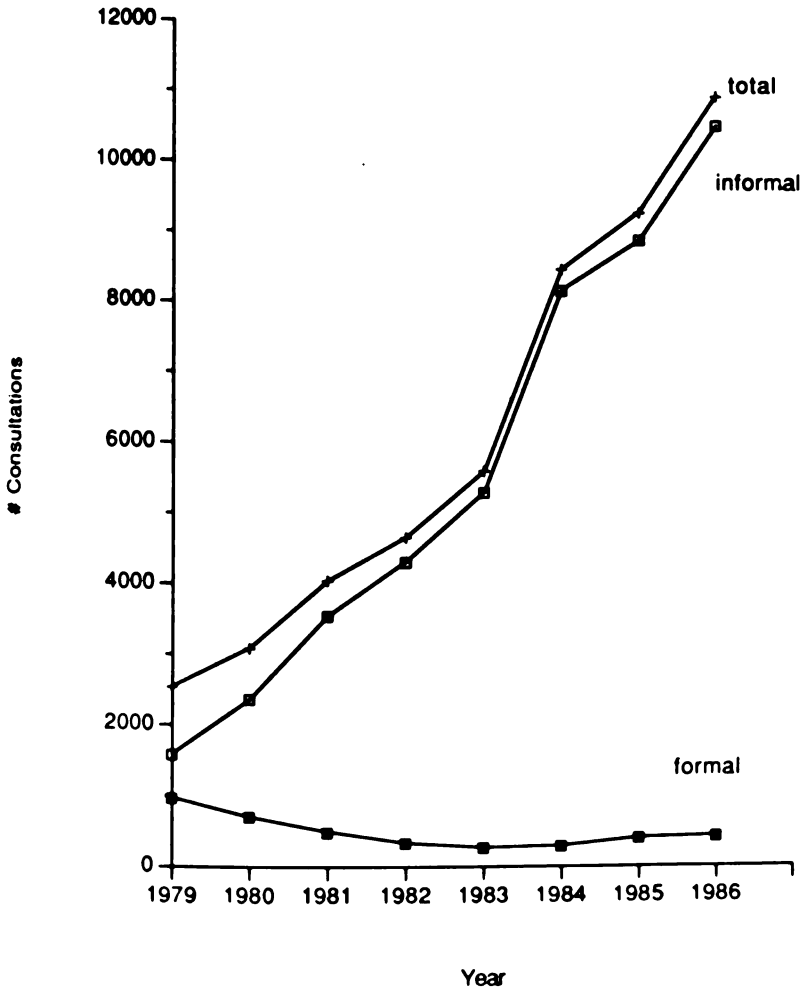


Figure 8. Number of extensions of the 90-day consultation period by opinion type.

<u>Year</u>	<u>Jeopardy</u>		<u>No Jeopardy</u>		<u>Total Formal Consultations</u>
	<u>Number</u>	<u>Mean # of days to complete</u>	<u>Number</u>	<u>Mean # of days to complete</u>	
1979	26	119	79	89	968
1980	31	82	96	71	707
1981	7	37	39	42	504
1982	11	52	30	30	341
1983	8	10	26	46	283
1984	11	21	16	41	298

Percent of projects completed within 2 weeks of the end of the 90-day period.

<u>Years</u>	<u>Percentage</u>
79-81	38
82-84	41

Note: All consultations between 1982 and 1984 were extended either 1) at the agency's request, 2) To gather more information, 3) because of the complexity of the problem, or 4) Because the problem was mutually agreed upon.

Figure 9. Number of jeopardy opinions in relation to number of formal and informal consultations.

<u>FY</u>	<u>Number of formal consultations</u>	<u>Number of informal consultations</u>	<u>Number of jeopardy opinions</u>
1979	968	1,585	67
1980	707	2,374	54
1981	504	3,535	29
1982	341	4,321	23
1983	283	5,305	33
1984	298	8,165	23
1985	409	8,860	37
<u>1986</u>	<u>421</u>	<u>10,504</u>	<u>52</u>
Total	3,492	44,606	325

Jeopardy opinions were reached in 8.3% of the formal consultations and 0.7% of the total consultations.

Figure 10. Projects cancelled or withdrawn because jeopardy opinions rendered, 1982-1984.

<u>Year</u>	<u>Reason</u>	<u>State</u>	<u>Project</u>
79-81	Economics	CA	Ford dealership construction
"	"	CA	Housing development
"	"	HI	Lava flow control study
"	"	OK	Chloride control study
82-84	"	HI	Marine shrimp farm
"	"	MT	Ski resort, sp. use permit
82-84	Endangered species	CA	Airport dikes, Oakland
"	"	FL	Rock plowing, Everglades
79-81	Exemption or permit denied	CA	Offshore oil facility
82-84	"	FL	Lindane use in sugar cane fields
"	"	FL	Oil and gas exploration, Big Cypress Nature Preserve
"	"	MT	Exploratory drilling, Cabinet Mountains
79-81	Unknown	TN	Gravel permit, Powell River
"	"	GA	Oil drilling (chose alternative site)
"	"	FL	Spruce Creek marina



International Association of Fish and Wildlife Agencies

Organized July 2, 1902

STREET LOCATION: 1325 Massachusetts Av., N.W. (202) 639-8200
MAILING ADDRESS: 1412 16th St., N.W., Washington, D.C. 20036

Jack H. Burman, Executive Vice President

**STATEMENT OF THE INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE
 AGENCIES ON THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT (HR 1467)
 BEFORE THE
 FISHERIES AND WILDLIFE CONSERVATION AND THE ENVIRONMENT SUBCOMMITTEE
 GORDON C. ROBERTSON, LEGISLATIVE COUNSEL
 MARCH 17, 1987**

The International Association of Fish and Wildlife Agencies, founded in 1902, is a quasi-governmental organization of public agencies charged with the protection and management of North America's fish and wildlife resources. The Association's governmental members include the fish and wildlife agencies of the states, provinces and federal governments of the U.S., Canada and Mexico. All 50 states are members. The Association has been a key organization in the promotion of the principles of sound resource management and the strengthening of federal, state and private cooperation in protecting and managing fish and wildlife and their habitats in the public interest.

The Association has consistently supported the Endangered Species Act and its underlying objectives. We supported its enactment and over the years have worked for needed revisions to improve administration of the Act for improved protection of fish and wildlife resources.

The Association supports reauthorization for 3 years and requests that the authority for funding with states under Section 6 be increased from the current \$6 million to \$12 million for FY 1988, \$13 million for FY 1989 and \$14 million for FY 1990. The 3 year reauthorization allows for adequate planning, but also provides the opportunity for additional adjustments that may be needed.

When the Act passed in 1973, the Federal Government agreed to enter into a grant program with the states. The reason for the grant program was that Congress in the Act called on the states to mount more intense programs to conserve threatened and endangered species. Recent annual appropriation history has been in the \$4 million range, far below the estimated needs indicated by our state members. The Association is pleased to see the higher reauthorization levels in HR 1467. The commitment by state fish and wildlife agencies is stronger than ever. Forty-six states and 3 territories now have cooperative agreements with the U.S. Fish and Wildlife Service for endangered species activities.

There are other aspects of the Act that need attention. The Association is recommending the following:

Problems arise from two decisions of the Eighth Circuit Court of Appeals. In January 1985 the Eighth Circuit held that Indians with reserved hunting rights under treaties could kill endangered species (in this instance bald eagles) for non-commercial purposes without penalty on reservation land. The effect of that decision is that, at least in the Eighth Circuit, the general Indian hunting right takes precedence over the taking prohibitions of the federal Endangered Species Act. In June 1986 the U.S. Supreme Court reversed the case by holding the Bald Eagle Act applicable to such conduct but failed to address the applicability of the Endangered Species Act, thus the Eighth Circuit decision on that aspect stands. This decision could have harmful results if the remaining population of a species is small, occurs on Indian lands, and is not covered by the Bald Eagle Act.

In February of 1985 the same Circuit ruled against taking of wolves in specified areas of Minnesota, a program recommended by the Eastern Timber Wolf Recovery Team. That decision sharply restricts the discretionary authority of the Secretary of the Interior and that of the states for regulated taking of threatened species. It held that there could be no taking of threatened species for conservation purposes except in extraordinary conditions to relieve population pressure and virtually no taking of endangered species. Prior to this ruling, the Secretary of the Interior could authorize the taking of endangered species in extraordinary cases and could authorize taking of threatened species in a variety of circumstances. Indeed, the 1973 House Report stated, "Once an animal is on the threatened list, the Secretary has an almost infinite number of options available to him with respect to the permitted activities for those species" (House Report #93-412,12). The Circuit ruling negates Congressional intention. Our immediate concern is the implication of this ruling for preservation of threatened species over the longer term.

The Association believes strongly that regulated taking of individual animals may sometimes be necessary to the long-term survival of a threatened species. The decision in the Minnesota case misconstrues the provisions for differing levels of protection afforded endangered and threatened species under the statute. This alters the integrity of the Act. Unless reversed, its effect will impact other areas of the Act and impair the future effectiveness of the program. For these reasons we recommend that the Eighth Circuit decision in the wolf case be legislatively overruled. In addition, we recommend amending the Act to maintain the integrity of state programs and the federal program with regards to Indian utilization of endangered species. The Association is prepared to work with the Subcommittee to draft language addressing the question of Indians taking endangered species on reservation lands.

Statement by Larry R. Shannon, Fish and Wildlife Director for the Minnesota Department of Natural Resources, and Chairman of the Endangered Species Committee for IANMA on the reauthorization of the Endangered Species Act (HR 1467), before the Fisheries and Wildlife Conservation and the Environment Subcommittee, March 17, 1987.

As a result of the 1984 ruling by the U.S. District Court in Minnesota (upheld by the 8th Circuit Court of Appeals, *Sierra Club and Defenders of Wildlife et al. vs William P. Clark, Secretary of the Interior, et al.* 755 F2d 608 (8th CIR 1985)), the taking of an animal classified as "threatened" under the Endangered Species Act is prohibited (including sport hunting and trapping) except under the following circumstances: a) animals preying on livestock may be killed in some circumstances by Federal employees; and b) when the Secretary of the Interior determines that "... population pressures within an ecosystem cannot otherwise be relieved." This reduces the flexibility of the Interior Department and the states to manage threatened species effectively, and essentially results in there being little distinction between management programs for threatened and for endangered species.

The Timber (Gray) Wolf is a case in point. The wolf is classified as threatened in Minnesota. Because the law prohibits even closely regulated public taking, the state Department of Natural Resources has assumed essentially no role in the management of the species because it is unwilling to commit game and fish license revenues for a management program and has no other funds available. Meanwhile, the Interior Department is deemphasizing wolf management in Minnesota. Interior's wolf management efforts in the state now involve a livestock depredation control program and a wolf research project for which funding is declining. This minimal effort is inadequate to insure the long-term

viability of the largest remaining population of Gray wolves in the U.S. outside of Alaska.

The inflexibility in the law constraining Minnesota involvement also thwarts implementation of the recommendation of the Gray Wolf Recovery Team (1978) that this species be reintroduced into suitable habitat in other states. The Interior Department has been unsuccessful in getting any state to even seriously consider taking wolves for reintroduction, even as experimental populations. One of the main reasons is that states fear that such experimental animals, which would have threatened status, would be beyond the authority of the states to regulate.

Consequently the Endangered Species Act, as interpreted by the court, does not promote efforts of wolf recovery mandated in the act.

The Act should be amended to allow the development of truly shared management programs for all threatened species between the state and federal governments to include the closely regulated taking of threatened species other than just within the narrow limits allowed under the present statute.

The Minnesota Department of Natural Resources endorses testimony on the Endangered Species Act reauthorization by the International Association of Fish and Game Agencies.

Blair Joselyn
Roger Holmes
MNR Section of Wildlife
16 March 1987

**Montana Department
of
Fish, Wildlife & Parks**



**HOUSE SUBCOMMITTEE
FISHERIES, WILDLIFE, CONSERVATION & THE ENVIRONMENT**

**TESTIMONY
FEDERAL THREATENED AND ENDANGERED SPECIES ACT**

March 17, 1987

The State of Montana favors a strong Endangered Species Act and program whose emphasis is focused on the prevention of the extinction of any species. We are concerned that this focus is not now apparent with the federal law, as it appears to make little distinction between those species considered to be endangered and those considered to be threatened.

The term "endangered" should be redefined to mean any species which is truly in danger of extinction throughout all of its range worldwide. The term "threatened" should be redefined to mean any species which is likely to become limited, rare or endangered in a portion of its range. This change would focus the Endangered Species Act protection to those species most severely threatened with extinction and most urgently in need of conservation.

Once these categories are clearly defined, appropriate distinction between how the force of law applies to the threatened and endangered categories must be made. A lack of legal distinction on this point limits management flexibility for the Secretary of Interior, as well as the states, restricting use of some management options in developing a comprehensive conservation program.

A case in point that is of particular concern to the State of Montana is our large predatory species which impact human safety, personal property and resident wildlife populations which are under the management responsibility of the states. In Montana these species are the grizzly bear and the wolf.

The first is a species that the state has been managing successfully for over 75 years, and the second is a species now extending its range into Montana from a secure population base in Canada.

The grizzly is considered a threatened species as it is in no danger of extinction in North America. At the same time, the species is managed in a more restrictive manner than is appropriate, given its potential for impacting human safety and personal property.

With respect to the wolf, it is considered an endangered species even though within a day's journey to the north it is considered a population which is neither endangered nor threatened. The potential impact of wolves on personal property and resident wildlife populations will not be properly considered factors in the management requirements for the species under the current act.

The State of Montana supports amendments offered by the International Association of Fish & Wildlife Agencies which address problems which have developed as a result of the February 11, 1985 Eighth Circuit Court decision "Sierra Club et al. v. William Clark et al." The secretary and the states should have the appropriate flexibility and authority for taking threatened species. The rigid "extraordinary case" interpretation should apply only to species truly facing extinction. The extraordinary case should not be applied to threatened species having problems in a portion of their range or expanding into areas where they have been absent for long periods of time.

The definition of "conservation" in Section 16, USC 1532(1) of the Endangered Species Act should be amended to exclude reference to the "extraordinary case" (1532(3)). This language should be added to the section referring only to endangered species. This would eliminate a standard which is difficult to define and impossible to meet (carrying capacity met or exceeded). This is particularly critical for species which can threaten human life, property or the conservation of resident game populations.

If the amendments suggested above concerning removal of the "extraordinary case" reference in the Endangered Species Act are not adopted, consideration should be given to establishing a separate provision in the act for the management of large predators such as the grizzly bear and wolf. It should provide for "taking" without the restraints imposed by the "extraordinary case" and require the Department of Interior to incorporate in the recovery plan of those "listed" large predators the states' objectives for prey species. This consideration will allow continued support for recovery by the states and the sportsmen and some funding support.

Another area of concern is the issue related to the funding of the Endangered Species Act and its being directed to species of high symbolic interest but not in danger of extinction. This focus ignores the many species genuinely in need of protection and actually in danger of extinction.

We recommend a congressional review of appropriations related to the species most in danger of extinction to support our point. The changes recommended for redefinition focus on extinction and should be accompanied by appropriate attention for funding the recovery of those species.

Along this same line, we suggest consideration of alternative funding for the Threatened and Endangered Species Act. Funding historically has been inconsistent and has lacked long-term stability. Although recovery plans identify costs of recovery and even assign costs to various agencies, both at the federal and state level, there are no funding sources identified. Once a species has been listed and a recovery program initiated, the annual appropriation levels are unpredictable. From the state's viewpoint, we find more and more that responsibilities for funding recovery plans often fall to the state agencies and generally these efforts are funded by sportsmen's dollars.

An alternative to this lack of assured and adequate funding would be the establishment of an endangered species trust fund. A trust fund could be administered by the Secretary of Interior with the focus being on those species which are nearing their recovery plan goals. In effect, those species which are in danger of extinction and have the full attention of the Congress would be funded with annual appropriations. Those species which are not in need of urgent attention would be funded under the trust fund until such time as they are finally off the threatened list.

Given the evolving nature of the Endangered Species Act and the intent by all parties to strengthen the integrity of the act, Montana supports a short-term reauthorization until such time as the problems identified are resolved. We would support a three-year reauthorization of the act, and trust that necessary modifications to the act would be completed either now or in that period of time.

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Telegram

► SENATOR MALCOLM WALLOP RPT DLY MGM
 CAPITOL ONE DC 20510

THE STATE OF WYOMING SUPPORTS AMENDMENTS TO THE ENDANGERED SPECIES ACT OFFERED BY THE INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES.

1 OF THE AMENDMENTS OFFERED WOULD ADDRESS PROBLEMS CREATED AS A RESULT OF THE 1985 EIGHTH CIRCUIT COURT DECISION "THE SIERRA CLUB ET AL VERSES WILLIAM CLARK ET AL". THE SECRETARY AND THE STATES SHOULD HAVE FLEXIBILITY AND AUTHORIZATION FOR TAKING THREATENED SPECIES.

THE EXTRAORDINARY INTERPRETATION SHOULD NOT BE APPLIED TO THREATENED SPECIES HAVING PROBLEMS ONLY IN A PORTION OF THEIR RANGE OR THOSE EXPANDING OR INTRODUCED INTO AREAS WHERE THEY HAVE BEEN ABSENT FOR A LONG PERIOD OF TIME. THIS IS APPROPRIATE ESPECIALLY WHERE LARGE PREDATORS ARE CONCERNED IE GRIZZLY BEARS AND WOLVES WHICH COULD BE A THREAT TO HUMAN LIFE, PROPERTY OR CONSERVATION OF UNGULATE POPULATIONS.

WE SUPPORT FUNDING RECOMMENDATIONS AS OFFERED BY THE IAFWA AS WELL AS THE RECOMMENDATION TO REAUTHORIZE THE ACT FOR A 3 YEAR PERIOD AS OPPOSED TO 5 YEARS.

WE ARE ALSO CONCERNED THAT AVAILABLE FUNDS ARE OFTEN DIRECTED TOWARD SPECIES OF HIGH SYMBOLIC INTEREST RATHER THAN SPECIES TRULY IN NEED OF PROTECTION OR ACTUALLY IN DANGER OF EXTINCTION SUCH AS THE BLACK-FOOTED FERRET. WE RECOMMEND PROFESSIONAL REVIEW TO PROGRAM FUNDING PROPOSALS TO ENSURE FUNDING IS DIRECTED TOWARD THOSE SPECIES MOST ENDANGERED WITH EXTINCTION.

THE STATE OF WYOMING WILL CONTINUE TO SUPPORT A STRONG ENDANGERED SPECIES PROGRAM WHERE FOCUS IS ON THE PREVENTION OF ANY WILDLIFE SPECIES BECOMING EXTINCT.

BILL MORRIS DIRECTOR WYOMING GAME AND FISH DEPT
 5400 BISHOP BLVD
 CHEYENNE WY 82002

12:38 EST

IPHRCZ 1 23M

WU 0200A 016 7M

THE STATEMENT OF THE COLORADO WATER CONGRESS TO THE
SUBCOMMITTEE ON FISH AND WILDLIFE CONSERVATION AND THE
ENVIRONMENT, HOUSE COMMITTEE ON MERCHANT MARINE AND FISHERIES,
REGARDING
REAUTHORIZATION OF THE ENDANGERED SPECIES ACT (H.R. 1467)

March 17, 1987

I am Tom Pitts, Professional Consulting Engineer, from Loveland, Colorado. Since December 1983 I have served as Project Coordinator for the Colorado Water Congress Special Project on Threatened and Endangered Species.

Mr. Chairman, I am grateful for the opportunity to testify before you this morning on behalf of the Colorado Water Congress. The Water Congress is an organization of approximately 1200 public and private entities, including every major public water supply agency in our state. Put simply, our members are charged with the task of providing water for the people of Colorado. We come before you in support of the reauthorization of the Endangered Species Act and seek your consideration of limited amendments which are necessary to make it possible for us to implement existing provisions of the Act effectively in western states. With limited adjustments--none of which affects the substantive provisions of the Act--we believe that our shared national goals of protecting endangered species and providing a stable and safe water supply will both be achieved.

With this background, I would like to report to you on the progress that federal and state government agencies, environmental groups and water suppliers are making together in implementing the Endangered Species Act as we plan the future of the Upper Colorado River Basin and the Platte River Basin. What is particularly important in this broad-based cooperative effort--both to those primarily concerned with the economic needs of the western states, and to those primarily concerned with environmental protection--is that our experience is demonstrating

that the intent of the Congress declared in Section 2(c)(2) of the Act is achievable. That provision states: "...[T]he policy of Congress [is] that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species."

Colorado River Basin

I am pleased to report that four years of effort have led to the development of a proposal agreed upon by federal and state government agencies, and environmental and water interests for recovery of endangered fish species in the Upper Colorado Basin. The program has been endorsed by the U.S. Fish and Wildlife Service (Region VI), U.S. Bureau of Reclamation (regional offices in Billings and Salt Lake City), and the State of Colorado. Endorsements are expected soon from the states of Utah and Wyoming. The importance of this effort can be best understood with a look at its history.

In June 1983 the U.S. Fish and Wildlife Service released a tentative draft recovery plan for three Colorado River endangered native fish species which, if implemented, would have abrogated state water rights systems in Colorado, Wyoming and Utah, nullified water allocation under longstanding interstate compacts and equitable apportionment decrees of the United States Supreme Court. In response to that proposal, the Colorado Water Congress established the Special Project on Threatened and Endangered Species in December of that year. Our goal was to develop an administrative approach that would allow continued water development in the Upper Colorado River Basin consistent with state water law and the Endangered Species Act. We have worked diligently and in good faith with a broad spectrum of interests to achieve that goal.

In March 1984 the Secretary of the Interior established the Upper Colorado River Basin Federal-State Coordinating Committee on endangered species. Participants included U.S. Fish and Wildlife Service, Region VI, Denver; Missouri River Division, U.S. Bureau of Reclamation, Billings, Montana; Upper Colorado River Region, Bureau of Reclamation, Salt Lake City; and the states of Utah, Wyoming and Colorado. The Coordinating Committee established fact-finding committees to explore the complex technical and scientific issues regarding the hydrology of the Upper Colorado River and the biology of the endangered fish species. The Colorado Water Congress has participated as an observer to the Coordinating Committee and as a member of the technical committees since their inception.

Early in 1985, the Colorado Water Congress proposed a draft recovery program for endangered fish species in the Upper Colorado River Basin. This proposal was designed to be a broad-based program leading to recovery of endangered fish species. After a year of intense negotiation and discussion, all interests reached a consensus on the recovery proposal. The final proposal provides for a long-term, comprehensive recovery program which addresses all causes of endangerment of the species, and provides for corrective actions.

Recovery Implementation Program for Endangered Species in the Upper Colorado River Basin

The recovery program produced through this process includes the following basic features:

- 1) 15-Year Time Frame: The goal of recovering endangered species in the Upper Basin is established within a fifteen-year time frame.
- 2) Recovery Implementation Committee: An implementation committee is established to oversee the recovery

process. Membership includes representatives from the U.S. Fish and Wildlife Service, the U.S. Bureau of Reclamation, the states of Colorado, Wyoming and Utah, the Western Area Power Administration, water development interests, and conservation organizations.

3) Water Management: The recovery implementation program sets forth the means for identifying flow needs for endangered fish species in the Upper Colorado River Basin and the means for acquiring those flows pursuant to state water law. Acquisition of water to meet the habitat needs of endangered species in accordance with state water law assures continuing legal protection of flows under state water rights systems, and is consistent with Section 5 of the Endangered Species Act.

4) Habitat Development and Maintenance: The program provides for development and enhancement of the physical habitat of endangered species including development of backwaters, nursery habitat, spawning habitat and implementation of fish passage facilities to expand the range of available habitat for the species.

5) Stocking of Rare Fish Species: Research indicates that use of hatchery fish can be an effective recovery tool, particularly in light of the fact that naturally-spawned endangered species in the Upper Colorado River Basin are highly susceptible to predation by introduced game species. This appears to be the principal cause of endangerment of the razorback sucker. Rearing of endangered fish species in hatcheries and in grow-out ponds located along the river provides an opportunity for endangered species to reach a size where they are not susceptible to predation prior to reintroduction. The recovery program provides for research to ensure the genetic integrity of hatchery stocks, the development of hatchery capability, and use of grow-out ponds in the natural environment

to achieve population goals to be established by the Recovery Implementation Committee.

6) Non-native Species and Sport Fishing: There is increasing recognition that predation by non-native, introduced game fish is a significant factor resulting in endangerment of native fishes. In addition, some native fishes are susceptible to sport fishing. The recovery program calls for curtailment of stocking of non-native species in areas where such species might conflict with rare or endangered species. Related provisions include: research on the degree of competition and predation in specific areas; review of sport fishing practices and regulations to assure protection of endangered species; a multi-faceted information and education program to educate fishermen on the need for conserving endangered fish species; and a rigorous enforcement program to underly these policies.

7) Research Monitoring and Data Management: Research programs which have heretofore constituted the bulk of efforts under the Endangered Species Act have been prioritized and organized to support specific recovery goals. Detailed study plans are being developed and criteria are being established to evaluate the success of research efforts. A standardized monitoring program has been implemented to ensure application of consistent methodology in monitoring endangered species populations and tracking those populations towards recovery goals. A centralized data management system has been established to facilitate research activities and to make the best possible use of existing data.

8) Funding: Annual and capital operating budgets for the recovery program have been established. Specific funding mechanisms have been identified which include contributions from the federal government, the states, power users and water users. The power users and states are committed to contributing more than \$26 million over the life of the recovery plan. An

additional element is the establishment of a \$10 million dollar capital fund for the acquisition of water rights in the Upper Colorado River Basin under state law. Provision of these funds by the Congress, and contributions by water users, will provide the mechanism for obtaining water on a priority basis to assure that flows are maintained in the future to provide habitat for endangered fish species. These flows, once acquired, will be protected under state law.

The Colorado Water Congress supports the implementation of the recovery program, and requests the Subcommittee to recommend authorization and appropriation of \$10 million dollars to establish the fund for acquisition of habitat, i.e., water rights, in the Upper Colorado River Basin in accordance with priorities established by the Recovery Implementation Committee. We request that the reauthorization (H.R. 1467) being considered by the Subcommittee, be amended to include authorization and appropriation of \$10 million dollars during fiscal year 1988 to support the Upper Colorado River Recovery Implementation Program for endangered fish species.

Platte River Basin

In October 1983 the U.S. Fish and Wildlife Service proposed minimum flows in the Platte River in Nebraska to provide habitat for migrating whooping crane, which occasionally stop on the Platte and endangered and threatened piping plover and least tern, which use the central Platte for nesting. The proposal would have resulted in conflicts with state water rights systems, interstate compacts and decrees of the U.S. Supreme Court equitably apportioning water among the states. In late 1984 the Colorado Water Congress, Wyoming Water Development Association, and Nebraska Water Resources Association petitioned the Secretary of the Interior to establish a federal-state Coordinating Committee on the Platte River to resolve these potential conflicts. The Secretary responded favorably and a federal-state

Coordinating Committee was established in March 1985. The Colorado Water Congress has participated in the efforts of the Coordinating Committee to reach a solution on the Platte River which meets the requirements of the Endangered Species Act and respects state water management and allocation systems. Like the Colorado River Basin Committee, the Platte group includes representatives of the states of Colorado, Wyoming and Nebraska; the Bureau of Reclamation; the U.S. Fish and Wildlife Service; and water and conservation organizations.

The effort on the Platte River has been hampered in part by lack of adequate staff support from the U.S. Bureau of Reclamation and the U.S. Fish and Wildlife Service. In 1986, the three water organizations petitioned the two agencies to increase staff support to develop information necessary for resolving the conflict. Recently the two agencies provided additional support for developing information necessary to resolve hydrologic and biological issues associated with the Platte River. However, sustained federal funding for this effort is in question at this time. In order to successfully complete this effort, continued federal funding and staff support will be necessary. That is one of the reasons why we are asking that the reauthorization proposal be amended to require the Secretary of the Interior to report to the Congress on progress of the Committees in this important endeavor.

Proposed Legislative Action

Mr. Chairman, in order to continue the progress we are making, we ask that this Subcommittee report legislation reauthorizing the Act for two years, and that you include funding for the implementation of the Colorado River Basin recovery plan. We also ask that you include procedural provisions which would allow us to continue our progress in the Upper Colorado River and Platte River Basins. Specifically, we ask that you provide:

--By March 1, 1988, or sooner, the Secretary of Interior shall provide Congress with reports of the progress made by Upper Colorado River Basin Coordinating Committee and Platte River Basin Coordinating Committee. The report from the Secretary would also include recommendations, formulated with the assistance of the Basin Committees and interested conservation and water groups, of reasonable and prudent measures, including necessary funding mechanisms, which can be utilized for avoiding jeopardy to and enhancing recovery of endangered or threatened species while respecting and maintaining applicable state and interstate water allocations and management systems.

--The Basin Coordinating Committees shall attempt to implement plans consistent with the federal Endangered Species Act, maintenance of beneficial uses of water pursuant to state water rights systems, and the uses of water apportioned to the states pursuant to federal interests compact and U.S. Supreme Court equitable apportionment decrees.

Where such a plan is unanimously adopted by one or both basin Coordinating Committees, the Secretary shall implement it, if it is consistent with the requirements of the Endangered Species Act and state water rights, interstate water compacts and Supreme Court equitable apportionment decrees.

--The reports from the Secretary to the Congress shall identify what further federal or state statutory or regulatory authority, if any, is needed to implement and continue to implement such plans, including levels of funding and funding mechanisms.

--The development of such plans shall not delay or halt consultations with the Secretary under the Endangered Species Act, water projects or project applications.

We would be pleased to have the opportunity to discuss specific language on these matters with the members of the Subcommittee and staff.

With the inclusion of such provisions in the context of a two-year reauthorization, the Congress will send a clear and positive message to all of the various interests represented in the negotiations in Colorado and Platte River Basins. Participating federal and state agencies--particularly the Fish and Wildlife Service, and Bureau of Reclamation, which have played a constructive and central role--as well as environmental and water groups, will understand that the Congress will be watching our work, and considering our results in the context of the implementation of the Act nationally. This will support continued good faith efforts by all parties, and will demonstrate that the two policies of the Act that some see as necessarily in conflict--the protection of endangered species and the continued application of state water rights systems--may be pursued simultaneously in the national interest.

Thank you again for the opportunity to be here this morning, Mr. Chairman. We hope that your Subcommittee will consider and incorporate these amendments to the Act which will in turn give us a further opportunity to report on our progress in the future.

The following was also submitted by Mr. John Fitzgerald, representing the Defenders of Wildlife, for the record of the hearing:

-Comments on the Corps of Engineers' Final Environmental Impact Statement (EIS) for the Stacy Reservoir, submitted by the Sierra Club, the Defenders of Wildlife, the Humane Society, and the Environmental Defense Fund

In addition, the following information submitted by Mr. Fitzgerald is in the Subcommittee files:

-Memorandum from Colonel Ginetti, District Engineer, Army Corps of Engineers, regarding the Stacy Dam Permit

-Memorandum from Sally Stefferud, Endangered Species Biologist, regarding a Stacy Dam Consultation Team meeting

-Comments on the Final EIS for the Stacy Dam Reservoir submitted by the Society for the Study of Amphibians and Reptiles

March 12, 1987

Colonel A.J. Genetti, Jr.
District Engineer
U.S. Army Engineer District, Fort Worth
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Colonel Genetti:

The following comments on the Corps of Engineers' Final Environmental Impact Statement (EIS) for the Stacy Reservoir are submitted on behalf of the undersigned organizations. We strongly urge the Corps to deny the permits requested by the Colorado River Municipal Water District (CRMWD) under Section 404 of the Clean Water Act (33 USC 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403).

We also believe that the Corps' granting of permits for the Stacy project will jeopardize the Concho water snake (Nerodia hartei paucimaculata) even if the U.S. Fish and Wildlife Service's (FWS) proposed mitigation measures are implemented as outlined in Appendix H of the EIS. Further, we question the need for a project of this magnitude. The evidence suggests that there are alternative sources of water to Stacy, which would supply the region's future needs without destroying critical wildlife habitat.

The following comments are divided into two sections. The first section analyzes Stacy's impact on the Concho water snake with particular attention to FWS's biological opinion contained in Appendix H of the final EIS. The second part of our comments focuses on other considerations addressed by the EIS, including water quality, recreation, population projections and alternative water sources.

I. The Concho water snake. The evidence to date clearly shows that the Stacy project will jeopardize the Concho water snake. The discussion of the snake contained in the final EIS is entirely based on FWS's biological opinion contained in Appendix H, which is fatally flawed. The species' current threatened status resulted from the previous construction of four other dams along the Concho and Colorado Rivers. According to FWS's final rule listing the Concho water snake as a threatened species (Federal Register, September 3, 1986), Stacy will affect "48 percent of the proposed critical habitat and 76 percent of the individual snakes." In a May 5, 1986 Endangered Species Act, Section 7 Conference Report sent to the Corps by FWS, FWS determined that the proposed Stacy Reservoir would jeopardize the Concho water snake and adversely modify the species' proposed critical habitat. The Conference Report specifically evaluated and rejected due to lack of biological data the mitigation measures now embraced by FWS and outlined in Appendix H. In his cover letter to the Corps, FWS Regional Director

Michael Spear stated that none of FWS's advisory recommendations would "accommodate the construction and operation of the Stacy Reservoir."

Since the issuance of the May conference report, there have been no new studies or biological information generated by FWS or anyone else with regard to the Concho water snake. However, one significant event concerning this species did take place in the summer of 1986, FWS Director Frank Dunkle met with members of the Texas Congressional delegation. This meeting was the culmination of a long-term lobbying effort by CRMWD General Manager Owen Ivie begun with a March 21, 1983 letter to Senator Lloyd Bentsen, to prevent protection of the species and allow Stacy's construction to proceed regardless of the Endangered Species Act. FWS Director Dunkle ordered his FWS subordinates to find a way to reverse their earlier evaluation of Stacy's effects on the Concho water snake (see attached August 27, 1986 Minutes of the Meeting of the Concho Water Snake/Stacy Dam and Reservoir Section 7 Consultation Team, page 1 and July 18, 1986 Memorandum for Record on Trip to Big Spring, Texas-Stacy Dam Permit from Colonel A.J. Genetti, Jr.) As a result, FWS issued its December 19, 1986 biological opinion reproduced in Appendix H of the EIS. The biological opinion is a complete reversal of FWS's earlier determination that there are no mitigating measures that would allow both construction of Stacy dam and survival of the Concho water snake.

The reversal in the biological opinion is the result of political manipulation rather than new scientific data. The mitigation measures proposed in the biological opinion are little more than a series of educated guesses backed by an inadequate ecological database. FWS and the Corps lack accurate data on the Concho water snake's reproductive potential, age at maturity, growth rates, survivorship, food availability and hibernation sites. Without such information, the proposed experimental mitigation measures have little chance of success.

On page H-10 of the biological opinion (Appendix H, EIS), FWS cites as "new" data, its Physical Habitat Simulation (PHABSIM) program based on Instream Flow Incremental Methodology (IFIM) analysis of the Concho water snake's habitat. The IFIM/PHABSIM does not represent new biological data. This computer modeling was based entirely on existing assumptions and data on the habitat requirements for the species, which FWS has already acknowledged in their Conference Report are inadequate. These studies are basically meaningless since basic biological facts about the Concho water snake are unknown. The IFIM/PHABSIM appears to have been developed to provide the illusion that new biological information on the snake exists. The IFIM method has previously only been used for fish existing in cold mountain streams. Consequently, its application to a snake species endemic to a low gradient warm water river is highly experimental and the resulting conclusions are likely to be inaccurate.

FWS's biological opinion also misuses the Viability and Risk Analyses, which like the PHABSIM/IFIM are seriously flawed to begin with due to the lack of data available on the Concho water snake. For example, on page H-11 of the biological opinion, FWS states that construction of the Stacy Dam "will lead to the loss of Concho water snakes in the Colorado River but not in the Concho River...(emphasis added)."
 This statement is incorrect. The Viability Analysis for the Concho water snake (November 1, 1986, Michael Soule and Michael E. Gilpin, prepared for FWS) states on pp. 15-16 that metapopulation modeling results "predict eradication of all snakes in the Colorado River following construction of the Stacy Dam. In addition, they predict a 20 percent reduction in the size of the Lower Concho population, even in the absence of catastrophes and unusual climatic events. These results ignore the possibility of catastrophes (emphasis added)."
 The chance of catastrophic extinction adds a further risk. Based on discussions with independent herpetologists, we believe the model would show an even greater risk of extinction if the authors had not relied on a number of basic assumptions concerning the Concho water snake's life history that are mistaken. The biological opinion also suggests on page H-11 that alternatives such as creation of habitat and artificial dispersal of genetic materials "will reduce or even eliminate" the risk of catastrophic extinction. FWS exaggerates the viability analysis on two counts. First, the viability analysis reaches no such sweeping conclusion (p. 17, Soule and Gilpin). It states that "the success of such interventions might enhance the viability of the snake above its current (pre-dam) status." Secondly, FWS assumes that the proposed interventions will actually succeed, which is highly unlikely according to herpetologists that we have consulted, because so much basic biological data on the Concho water snake is lacking. The authors of the viability analysis themselves state that more biological data is required to accurately estimate the success of such measures.

On pages H-11-12 of the biological opinion, FWS lists the assumptions upon which its "reasonable and prudent alternatives" are based. The fourth assumption, "long-term commitments to best management practices will be maintained by all parties", is based on the faulty belief that CRNWD will cooperate in carrying out all the proposed mitigation measures. We have little confidence that CRNWD will make a good faith effort to prevent extinction of the Concho water snake and aid recovery of the species. CRNWD has carried out a systematic campaign to exempt the Stacy project from the requirements of the Endangered Species Act. An illustration of typical CRNWD operating procedures is contained in Appendix G of the EIS. CRNWD's habitat mitigation offer is minimal and designed to save CRNWD money rather than enhance wildlife habitat.

Neither the Corps nor FWS have the resources to provide adequate oversight of CRNWD. Placing the fate of the species in the hands of developers who have actively sought its destruction would be a complete abdication of the Corps' responsibilities under the Endangered Species Act. Any cooperative agreement signed by FWS

and CRMWD would for all practical purposes be unenforceable.

Proposed Reasonable and Prudent Alternatives (Unless noted, all page numbers in the following section refer to the FWS biological opinion contained in Appendix H of the EIS.)

1. Monitoring (pp. H-12-13). CRMWD will be responsible for monitoring the Concho water snake and its habitat to determine if the mitigation measures are successful. CRMWD cannot be expected to provide unbiased data on the status of the species. CRMWD has a financial interest in Stacy's construction. Therefore, it is naive to expect that CRMWD would indicate to FWS and the Corps that the alternatives are not working.

2. Studies (pp. H-13-14). FWS admits on p. H-13 that it lacks the most basic biological information for the Concho water snake. FWS's non-solution to this dilemma is to propose studying the species while the Stacy project is constructed. If these studies show that the mitigation measures are not working, it is unlikely that construction will be halted. Once Stacy is in place, it will be impossible to reverse any damage done to the Concho water snake and its habitat. These studies will largely be carried out by CRMWD, therefore any results are likely to be biased. This alternative was proposed by CRMWD prior to the May 5, 1986 FWS-Corps Conference Report. FWS stated in the conference report on page 5 that "this alternative was determined to be infeasible, because if the study determined the snake and reservoir could not co-exist, there would already be irreversible damage to the snake's habitat as a result of construction activities."

The full-time biologist to be hired by CRMWD (p. H-24) to monitor the snake's status will, in all likelihood, merely be chronicling the species' extinction. Studying the species while Stacy is built does not represent an adequate and certainly not a "prudent" mitigation measure. To be useful, studies should be carried out prior to construction. Further, since the proposed biologist will be paid and employed by CRMWD, his/her findings are likely to coincide with the developer's needs rather than those of the Concho water snake.

3. Creation of Artificial Habitat (pp. H-14-21). FWS lacks sufficient biological information to successfully create new habitat. Under the Endangered Species Act, the Corps and FWS are required to protect the species' proposed critical habitat where it is an established fact that the Concho water snake can survive. FWS's reasons for previously rejecting this alternative in their May 5, 1986 conference report (p. 5) are still valid:

We considered the possibility of creating and improving habitat for the Concho water snake through creation of riffles, development of rocky shoreline areas on reservoirs, provision of specified stream flow release regimes,

removal of silt and vegetation from the channel, and construction of artificial channels, as in alternatives 1 through 3 and 5 above. However, we determined that these alternatives are not viable because detailed knowledge of the age-specific habitat requirements of the Concho water snake does not presently exist. Such information would require several years of extensive and intensive field and laboratory study to obtain. Habitat requirements and limits for all age classes would be needed along with seasonal variations, as well as any specialized habitat needs such as for mating, bith, etc. Limiting factors would have to be determined. Although riffles appear to be a limiting factor in some places, other areas which have apparently suitable riffles available are not used by the snakes. In those areas, other factors limit the survival of the snake. Past experience with other species has shown that without such detailed information, the probability that created habitat would actually support viable, reproducing Concho water snake populations is low.

As stated previously, FWS has no new biological data to justify reversing their May 5, 1986 determination.

The ill-conceived artificial habitat proposals will in no way compensate for the destruction of irreplaceable habitat crucial to the survival of the Concho water snake and numerous other species. Stacy Reservoir will submerge 32 miles of the Colorado River, 14 miles of the Concho River and 17 miles of various creeks, inundating 240 acres of riverine habitat. Disruption of the existing water regime could adversely affect river habitat as far as 100 miles downstream.

Much of FWS's habitat creation plans are based on the assumption that riffle zones are the primary factor limiting the number of Concho water snakes. FWS does not have sufficient biological data to reach this conclusion. Other habitat features such as basking areas, hibernation sites, foraging areas and adequate water quality may be missing from the proposed artificial habitat areas. Without information on these and other ecological factors FWS could create an infinite number of riffle zones and the species could still become extinct. FWS has done no studies to determine if these measures are technically feasible and possible to maintain in "real world" situations.

Another issue with regard to habitat creation that is not addressed by the Corps' EIS is the need for further 404 permits for each proposed habitat modification. The creation of riffle zones will require extensive dredging and filling. Such

mitigation measures could affect other species, habitat downstream and water quality. The Corps cannot issue additional 404 permits for these activities based on the Stacy Reservoir EIS. Each habitat modification would require separate analysis. The Corps needs to address the issue of additional 404 permits.

4. Relocation of snakes (p. H-17 and p. H-24). Moving snakes to new locations is even riskier than attempting to create new habitat. The net result could be the needless destruction of the few remaining Concho water snakes. The May 5, 1986 FWS conference report, in rejecting the capture and transfer of snakes to new locations, stated that: "Transfer of any species outside of its historic range is contrary to FWS policy for biological and management reasons" (p. 5 of the Conference Report.)

5. New reservoir habitat (p. H-21). The most absurd proposal in the biological opinion is the creation of habitat along the shores of the Stacy Reservoir. This proposal is premised on the ability of the Brazos water snake (Merodia harteri harteri) to live in impounded waters. However, the Brazos water snake is a separate subspecies of the Harter's water snake (Merodia harteri), which is not threatened by the Stacy Reservoir. The Concho water snake (Merodia harteri paucimaculata), the subspecies of the Harter's water snake, which is threatened by the Stacy project has never been found in a reservoir. The "Risk Analysis for the Concho Water Snake" prepared by Michael Soule for FWS (October 17, 1986) states on page 14 in its "Conclusions and Recommendations" section: "Based on the experts' opinions, the construction of artificial habitat in the reservoir is not only unlikely to succeed, but it will not address one of the most serious issues raised by the existence of Stacy dam, namely the fragmentation of the population." The Risk Analysis gave creation of reservoir habitat only a 15 percent chance of success.

6. Incidental take (pp. H-25-26). FWS proposes that one CRWMD employee attempt to catch snakes during the construction and filling of the reservoir. The biological opinion gives no clue as to how this employee will have the knowledge to be in the right place to prevent substantial loss of individual snakes. We believe the Stacy Dam will result in substantial killing of snakes in violation of the Endangered Species Act. In order for the Corps to avoid a violation of the Endangered Species Act, the incidental taking statement of the biological opinion must specify the impact of the incidental taking on the species (see Section 7(b)(4)(B) of the Endangered Species Act). Neither the incidental taking statement in the biological opinion nor the EIS specify such impact. Appendix H only notes the problem. The lack of scientifically valid data prevents the biological opinion from specifying the impact, limiting the impact or setting forth useful conditions for preventing incidental take. The EIS therefore falls short of the Corps' obligation to describe the short- and long-term impact on the Concho water snake of the Stacy dam.

Conclusion. The FWS's biological opinion is little more than a creative writing exercise dictated by political expediency rather than good science. The proposed "mitigation measures" are highly experimental and will not aid recovery of the species. Several of these measures, particularly translocation of snakes and construction associated with creation of artificial habitat, are likely to result in the taking (i.e. killing) of individual snakes and thus may pose an additional threat to the species' long-term survival.

We believe that the FWS biological opinion fails to meet the requirements of Section 7 of the Endangered Species Act. A decision by the Corps to grant a permit for the completion of the project based on this biological opinion would be a violation of the Corps' independent duties under Section 7(a)(1), 7(a)(2) and 7(b)(4) of the Endangered Species Act to conserve and enhance the recovery of threatened species.

II. Other EIS Issues. The areas of the Colorado and Concho Rivers to be flooded have significant scenic, recreational, fish, wildlife, historic and cultural resource value. Texas does not need another 19,000 acres of reservoir at the expense of losing one of the finest sections of free-flowing river left in the State. j

The EIS fails to adequately consider the alternative sources of water available in the region particularly in the area of cost estimation. Secondly, the EIS is deficient in its analysis of the area's water needs. A decade has passed since Stacy was first proposed yet the Corps has done little analysis of how the area's municipal and industrial water needs have changed in the ensuing years.

While ensuring adequate water needs for West Texas is a reasonable goal, artificially creating a demand for water is not. We sympathize with area residents' concerns but we also believe that CRMWD has carried out a systematic public relations campaign designed to frighten West Texans into supporting a water project that does not serve their best interests. CRMWD has consistently made inflammatory, exaggerated statements such as, "without adequate water, that area [West Texas] is doomed to almost literally die of thirst" (p. 112, EIS). Such irresponsible propaganda has prevented a rational discussion of the pros and cons of Stacy Reservoir even by the Corps.

A. The Region's Water Needs. The need for the Stacy project is based on 1977 projections by the Texas Water Development Board and the 1984 Texas Department of Water Resources' report, Water for Texas. These reports, particularly the 1977 projections, fail to take into account the radical changes in the West Texas economy caused by the recent collapse of the oil and gas industry. According to newspaper reports from the region, a population exodus has been taking place as workers leave to seek employment elsewhere. This development should be a significant consideration

in determining the need for Stacy and estimating future water requirements for West Texas. Yet the Corps devotes only two sentences of the final EIS on page 34 to the slowdown of the oil and gas industry and the general economic decline in the region.

Further on page 33, the EIS indicates that the population in the three counties surrounding the Stacy site have been declining "for the past 50 years." Falling population combined with the general economic decline in the region make the need for Stacy highly questionable. Certainly, a much smaller reservoir could adequately meet the future requirements of the area.

B. Alternative Water Sources. There are viable alternatives to Stacy that would supply better quality water without destroying irreplaceable wildlife habitat. A pipeline from the existing Lake Buchanan, for example would provide cheaper, cleaner water with little impact on wildlife habitat. CRMWD's claim that Stacy is the only water source available is absurd. The ability of CRMWD to obtain water rights for another reservoir location should not be the Corps' concern in judging the merits of CRMWD's permit application. If there is a need for an alternative source of water to Stacy, obviously a political solution will be found. Indeed to date, CRMWD has demonstrated incredible ability to obtain political deals to its liking. The most notable example is the FWS biological opinion in Appendix H. Obtaining a new water rights permit to develop a water supply at a location other than Stacy is well within the capabilities of CRMWD.

1. Mitigation Costs. The alternatives section of the EIS does not fairly compare Stacy with other alternative sources of water. For example, Table IV-3 on page 13, in estimating the costs of the various alternatives does not include any habitat or cultural resources mitigation costs, which will be substantial for Stacy.

The EIS's failure to estimate the costs of cultural mitigation is particularly deficient since Appendix D contains extensive documentation of the significant archaeological sites located at the Stacy site. Additionally, a memorandum of agreement between CRMWD and the Corps has been agreed upon and is also included in Appendix D, Attachment 1 (pp. D-51-58).

The total habitat compensation requirement listed on page 13 for Stacy includes only 115 acres for riparian habitat loss mitigation. This number appears to be far too low considering that the sections of river, which will be affected by Stacy are considered to be of such quality that they were proposed for inclusion in the proposed National Rivers Inventory and are recognized as eligible for consideration for inclusion in the proposed State Wild and Scenic Rivers System (p. 19, EIS). Table IV-3's Total Compensation Requirement Category also appears to be incorrect compared to page 54 of the EIS (Mitigation of Adverse Impacts) which states that FWS recommends 197 acres of riparian and 8,226 acres of

rangeland. However, in the draft EIS (p. 63) the FWS report called for 3,735 acres of riparian mitigation. The only reason that we can discern for this radical drop in the riparian acreage figure from the draft to the final EIS is the possibility that there is so little riparian acreage left in West Texas that FWS was forced to offer a substitution of upland acreage in lieu of non-existent riparian habitat. If this is true than Stacy's impact is even more serious since an entire category of wildlife habitat will be largely eliminated in the region. The issue of habitat mitigation needs to be corrected and clarified by the Corps.

2. Water treatment costs. Another significant consideration omitted from the Corps' comparison of Stacy and the alternatives is the cost of water treatment. Water quality for Stacy will be extremely poor (pp. 37-38, Appendix B, EIS). Stacy water is expected to be only slightly better than that of the existing E.V. Spence Reservoir, where water quality is extremely bad due to chlorides, sulfites and total dissolved solids. While Table 8, Appendix B on p. B-22 clearly shows that Stacy's water quality would be much worse than the majority of the alternatives, no information is provided on water treatment costs. Obviously, treatment is needed before consumers can drink the water.

3. Nitrates. A second significant water treatment cost issue is the expense of sealing off potential nitrate springs at the Stacy site (pp. 37-38, p. B-16, EIS). The EIS states that nitrate levels of water samples taken at the site were "above the State drinking water standard of 10 mg/l and could be potentially harmful to infants under 3 months of age" (p. 37, EIS). If Stacy Reservoir ultimately has high nitrate concentrations, the costs of correcting the problem would significantly add to Stacy's overall water treatment costs since groundwater-fed tributaries which are high in nitrates would have to be impounded and isolated. Excess nitrate levels would not be a problem at alternate reservoir sites (p. B-23, EIS).

The omission of these significant cost factors is misleading to West Texas consumers and prevents them from making informed choices about their future water needs. Stacy Dam will certainly add to CRMWD's profits but the proposed project will not necessarily provide their customers with a cost effective source of good quality drinking water.

C. Recreation (p. 35, EIS). In considering recreational values, the EIS has underestimated the recreational worth of riparian and wildlife habitat in comparison to that of reservoirs. The gain of a few boat launch ramps and picnic tables does not compensate for the destruction of a river and should not be considered a net benefit of Stacy.

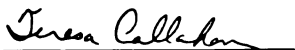
Conclusion. The Corps' final EIS for the Stacy Reservoir is extremely biased towards CRMWD at the expense of both the best interests of West Texas water consumers and wildlife particularly

the threatened Concho water snake. The time frame for issuing the permit has obviously been designed to ensure that CRMWD's May 14, 1987 state water permit deadline is met rather than adequately resolving issues such as the impact of Stacy Reservoir on the Concho water snake or performing sufficient analysis of alternative water supply sources.

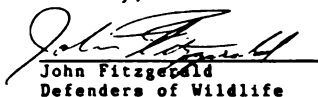
Part 1501, Section 1501.2(c) of the Council of Environmental Quality Regulations on Implementing National Environmental Policy Act (NEPA) Procedures (40 CFR 1500-1508; 43 FR 55990) states that agencies shall "study, develop and describe appropriate alternatives to be recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by Section 102(2)(E) of the Act." The Corps has failed in the EIS to adequately develop appropriate water supply alternatives. As a result, the public cannot make an informed decision on the relative merits of Stacy versus other potential sources of water. The requirements of the state water permit do not supersede NEPA requirements. The EIS misleads the public by inferring that Stacy is the only viable source of water for West Texas when in actuality, there are alternative water supply sources that are more cost-effective, less controversial and would supply better quality drinking water.

All evidence to date indicates that the Stacy Reservoir will jeopardize the Concho water snake. The Corps cannot hide behind the scientifically inadequate, politically motivated FWS biological opinion contained in Appendix H of the final EIS. The Corps has an independent duty to address the many unresolved questions about Stacy's impact on the Concho water snake or ask FWS to resolve these questions. We believe that if a permit for Stacy is issued based on the present EIS, the Corps will be in violation of the Endangered Species Act, which requires government agencies to avoid jeopardizing species and to work to conserve and aid the recovery of threatened species such as the Concho water snake. We strongly urge the Corps of Engineers to deny CRMWD's request for 404/10 permits for Stacy Reservoir.

Sincerely,



Teresa Callahan
Sierra Club Wildlife and
Endangered Species Committee


John Fitzgerald
Defenders of Wildlife



Jennifer Lewis
Humane Society of the U.S.


Michael Bean
Environmental Defense Fund

cc: Frank Dunkle, Director, U.S. Fish and Wildlife Service
Michael Spear, Regional Director, FWS-Albuquerque

Testimony of

James E. Douglas Jr.
Acting Deputy Assistant Administrator

National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Before

Subcommittee on Fisheries and Wildlife
Conservation and Environment
Committee on Merchant Marine and Fisheries

House of Representatives

March 17, 1986

Mr. Chairman, and Members of the Subcommittee:

I am James E. Douglas, Jr., Acting Deputy Assistant Administrator for Fisheries, National Oceanic and Atmospheric Administration (NOAA), and I am pleased to be here to present some of the history of our endeavors to protect endangered and threatened sea turtles.

INTRODUCTION

Five species of sea turtles occur in the waters of the southeast United States: the loggerhead, Kemp's ridley, green, leatherback, and hawksbill. These species were listed under the Endangered Species Act in 1970 and in 1978.

Incidental Capture Estimates

Based on observer data, NOAA estimates the total annual incidental catch of sea turtles by the offshore shrimp fleet

in the southeast United States (North Carolina through Texas) to be 47,681 turtles, 11,427 of which drown (Henwood and Stuntz, 1986). These estimates are derived from a total of 27,578 hours of observer effort aboard commercial shrimp vessels and are from three sources:

- (1) The sea turtle incidental catch and mortality project (1979-1981), which included 10,905 hours (standardized to 100 ft net hours) of observer effort aboard commercial trawlers in the U.S. Gulf of Mexico and U.S. South Atlantic. A total of 318 turtles were captured.
- (2) The excluder trawl project (1978-1980) in which a total of 14,056 observed towing hours (standardized to 100 ft net hours) resulted in the capture of 563 turtles.
- (3) The Gulf of Mexico shrimp fleet discard project (1973-1978) in which a total of 2,617 observed towing hours (standardized to 100 ft net hours) resulted in the capture of 3 sea turtles.

Observer coverage for the above projects was in offshore waters, that is seaward of the baseline from which the territorial sea is measured.

These observer data show that of the sea turtles caught in shrimp trawls in the South Atlantic 21 percent die, and in the Gulf of Mexico 29 percent die. In the Gulf of Mexico there is a variation in the mortality of incidentally caught

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sea turtles, for the eastern Gulf the value is 34 percent, the central Gulf 22 percent and for the western Gulf 38 percent.

We estimate that 9,874 loggerheads are killed annually by offshore shrimp vessels (Henwood and Stuntz). Of these, 6,745, or 68 percent are from the South Atlantic (North Carolina to and including the Florida east coast) and 3,129 or 32 percent, are from the Gulf of Mexico. The loggerhead, which is a threatened species, represents approximately 90 percent of the total incidental take.

The estimated number of Kemp's ridley sea turtles killed each year by shrimp trawling is 767 turtles (Henwood and Stuntz, 1986), of which 266, or 35 percent, are from the U.S. South Atlantic and 501, or 65 percent, are from the U.S. Gulf of Mexico. In the western Gulf (Texas) we estimate that 249 (32 percent) Kemp's ridley die in shrimp nets each year. Kemp's ridleys account for approximately 6 percent of the total incidental take. It is the most critically endangered species. Its nesting numbers have dwindled from an estimated 40,000 in one day in 1947 to an annual estimate of 572 in 1986 (Byles, 1986).

The green turtle, endangered in Florida and threatened elsewhere, is more of a tropical species and thus not encountered so frequently by shrimpers. Each year an

estimated 229 green sea turtles are killed in shrimp nets (Henwood and Stuntz, 1986). Of these 104 (45 percent) are from the South Atlantic, mainly Florida, and 125 (55 Percent) are from the Gulf of Mexico. Unlike the loggerhead and Kemp's ridley turtles, green turtles are vulnerable to trawlers only during short phases of their life cycle when they exhibit omnivorous feeding habits, and during nesting seasons when they may be captured off their nesting beaches. The remainder of their lives are spent on seagrass pastures where little or no shrimp trawling occurs.

The leatherback and hawksbill sea turtles are species that occasionally are caught in shrimp trawls. The estimated annual catch and mortality is relatively small compared to other species.

The NOAA incidental take data is the best scientific information available for the southeast U.S. However, additional cooperative projects to determine incidental catch levels by shrimpers have been conducted by NOAA, states, and by private researchers. An overview of the sea turtle incidental catch problem is provided in the 1984 U.S. Recovery Plan for Marine Turtles (Hopkins and Richardson, 1984).

Cox and Mauerman (1976), based on interview data from 66 Texas shrimpers, concluded that in 14,200 fishing days 230 sea turtles were captured for an average of 3.48 turtles per vessel. The mortality rate was estimated at 16 percent.

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Ulrich (1978, 1979), conducted a study of annual sea turtle catch and mortality by shrimpers in South Carolina. He estimated the catches were 4,505 in 1976 and 3,191 in 1977, and mortalities were 820 (18 percent) in 1976 and 1,382 (43 percent) in 1977.

Hillstead and others (1978) conducted studies in Georgia to determine incidental catch and mortality levels. They estimated that 30.7 turtles were captured by each vessel each year. Based on interview data the reported mortality rate was estimated to be 7.9 percent. However, onboard observations revealed a mortality estimate of 15 percent.

In a 1984 survey by Fuller (1984), 80 percent of Louisiana shrimpers interviewed indicated that sea turtles were being caught in northern Gulf waters. The majority of these captures were said to occur in waters of 15 feet or less. The species captured that could be reliably identified was the Kemp's ridley.

Other cooperative projects to determine incidental catch levels by shrimpers have been conducted more recently. A cooperative sea turtle tagging project in Georgia and north Florida accounted for sea turtle captures of 40 in 1984 (Kontos, 1984) and 84 in 1985 (Kontos, 1985) by 12 vessel captains.

Stranding Data

Some sea turtles that die in the marine waters of the United States wash into shore and are found stranded in

coastal areas. Because of the protected status of the species, a need to collect information about the species, and interest from the public, NOAA in cooperation with the states, established a volunteer network in 1979 to patrol coastal U.S. beaches and document and report sea turtle strandings.

Often it is impossible to determine the cause of death of a stranded turtle. Not all of the sea turtles that strand can be attributed to shrimp trawling. However, there often is a correlation between the level of strandings and major shrimping effort. This correlation has been documented by scientists and Sea Turtle Stranding and Salvage Network personnel from South Carolina to Florida, as well as Louisiana and Texas (Ulrich, 1978; Hillstead et al., 1978; Fuller, 1984).

From January 1980 through December 1986, a total of 8,317 marine turtles (excluding all headstarted sea turtles - eggs taken from turtles' nests and raised in captivity at NMFS Galveston Laboratory for their first year) were reported as stranded along the coastal areas of the southeast United States from North Carolina through Texas. Eighty-three percent of these stranded turtles (6,905) were loggerheads, 7.2 percent (597) were Kemp's ridleys, 5.0 percent (415) were

green turtles, and the remaining 4.8 percent (400) were hawksbills, leatherbacks and unidentified turtles combined. These percentages are similar to those reported for the incidental take in shrimp nets.

For all species combined, 78.3 percent (6,512) of all reported strandings occurred along the U.S. South Atlantic coast from North Carolina through Florida, and 21.7 percent (1,805) occurred along the Gulf states.

For loggerheads, 85.1 percent (5,874) of all reported strandings are from the South Atlantic and 14.9 percent (1,031) are from the Gulf of Mexico. In contrast, 18.8 percent (112) of all reported Kemp's ridley strandings are from the South Atlantic and 81.2 percent (485) are from the Gulf of Mexico. This pattern is consistent with the distribution of the observer based estimates of the incidental take of Kemp's ridleys. Kemp's ridley strandings in Texas account for 59.3 percent of all reported ridley strandings. Reported strandings of Kemp's ridleys in Louisiana account for 17.8 percent of the U.S. total. However, beach coverage effort in Louisiana prior to 1986 was poor. For 1986, 92 Kemp's Ridleys were reported stranded in Louisiana. This compares to a total of 14 Kemp's ridley reported between 1990 and 1985.

For green turtles, 69.2 percent (287) of all reported strandings were from the U.S. South Atlantic and 30.8

percent (128) were from the U.S. Gulf of Mexico. Of the U.S. South Atlantic strandings, 88.2 percent (253) were from the east coast of Florida.

These strandings data tend to corroborate the data from direct observations, and together they indicate that shrimp trawling is a significant source of sea turtle mortality.

Gear Research

In 1978 NOAA initiated a research program to develop gear that would reduce the mortality of sea turtles associated with shrimp trawling. Other project goals were to prevent significant shrimp loss and to minimize the economic impacts on shrimp fishermen.

The earliest solution, called an excluder panel, was a barrier fitted across the mouth of the trawl. The panel was made of large webbing that would prevent sea turtles from entering the net but would allow shrimp through the meshes or openings. The best configuration reduced the catch of sea turtles by 75 percent but also reduced the shrimp catch by 15 to 30 percent. This was not an acceptable solution and the excluder panel was abandoned.

Another technique developed as part of this program was to reduce the tow time. Analysis of incidental sea turtle capture data showed that there is a direct correlation

between the length of the tow and the number of comatose and dead sea turtles in the net. As tow time increases mortality increases. For 60 minute tows mortality averages 5.4 percent percent, for 90 minute tows 11.4 percent, for 150 minute tows 23.2 percent and for 240 minute tows 40.9 percent. Although this seems to be a reasonable technique to reduce sea turtle mortality associated with shrimp trawling, tow times average about 150 minutes in the South Atlantic and 240 minutes in the Gulf of Mexico. We do not believe that reducing tow times to 90 minutes is a economically feasible fishing strategy. Additionally, any scheme based on tow time is difficult to enforce.

Research on the NMFS Turtle Excluder Device, or TED; began in 1980. By 1981 we had developed this gear to the point where the incidental catch of sea turtles was reduced by 97 percent with insignificant loss of shrimp. Since the development of the prototype we have worked with Sea Grant, commercial shrimpers and others to refine the TED. The TED was reduced in size and made lighter and collapsible for safer and easier handling. A number of comments, suggestions and constructive criticisms were studied and tested. Those that worked were adopted. The Service did everything it could to make the TED so that it would work for shrimpers and not be a hazard or a problem for those who use it.

This gear has other benefits in addition to saving sea turtles. It releases debris and unwanted by-catch such as sharks, rays, jellyballs and horseshoe crabs. Finfish separators can be installed to release finfish--up to 78 percent during the day and up to 53 percent at night.

Other parties were also working on excluder devices in the 70's and early 80's. In addition to the TED developed by NOAA, others have been developed in Georgia, Texas, and Louisiana. These seem to be as effective, and are less costly, and perhaps easier to handle than the NMFS prototype. NOAA commends these efforts and is pleased that shrimpers have a choice of TEDs from which to select.

Voluntary TED Program

NOAA began a formal program in 1983 to encourage shrimp fishermen to use the TED voluntarily. Through this program we had TEDs built and delivered to shrimpers who agreed to use them in commercial shrimp trawling operations. NOAA gear experts worked with these shrimpers to properly install and use TEDs. We worked with Sea Grant and industry groups to transfer this technology. The Southeastern Fisheries Association, Texas Shrimp Association and the Bryan County Fisheries Cooperative were helpful in the early stages. Several environmental organizations, including the Center for Environmental Education, Greenpeace, the Environmental Defense Fund and Monitor International, provided assistance during this program.

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An industry advisory group was formed to assist the industry in adopting the new gear. This group was co-chaired by an industry member and a member representing a conservation group. They worked long and hard on this issue. Despite all this effort the voluntary program was not successful. Only 300-400 of an estimated 17,200 shrimp trawlers are using TEDs.

Proposed Regulations

Because of the failure of the voluntary program, the Director of our Southeast Region began to develop a regulation that would reduce the number of sea turtles killed incidental to shrimp trawling. Last August, Under Secretary Calio met with representatives from the shrimp industry and environmental community to discuss this draft proposal. During this meeting representatives of both groups expressed concern over the proposal and indicated a willingness to work together to develop a solution to the problem.

Under Secretary Calio invited the shrimp industry and environmental community to select participants for a group that would negotiate a mutually agreeable solution. The Center for Environmental Education, the Environmental Defense Fund, the Fund for Animals, Greenpeace, Monitor International, the Bryan County (Georgia) Fisheries Cooperative, the Concerned Shrimpers of Louisiana, the

Louisiana Shrimp Association, the Southeastern Fisheries Association, the South Carolina Shrimpers Association and the Texas Shrimp Association were represented on the negotiating group.

On August 22, 1986, the Center for Environmental Education, under the citizen suit provisions of the Endangered Species Act, wrote Secretary Baldrige alleging that NOAA and NMFS were violating both the Endangered Species Act and the Magnuson Fishery Conservation and Management Act because they were not exercising their authorities to prevent the losses of sea turtles and fin-fishes. The Center indicated a willingness to work with the agencies to correct the alleged deficiencies without litigation, if possible.

With the assistance of a professional mediator from Juneau, Alaska, open meetings were held in New Orleans, Louisiana (October), Jekyll Island, Georgia (November), Washington D.C. (November) and Houston, Texas (December). The negotiating team reached an agreement that all but one of the participants signed. The members recommended this agreement to NOAA as offering the best prospect for reducing the incidental catch and mortality of sea turtles associated with shrimp trawling while avoiding, to the greatest extent possible, adverse economic effects to the shrimp industry. Therefore, on March 2, 1987, NOAA

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issued a proposed rule that would implement the conditions of the mediated agreement. Since then, two of the industry organizations represented in the negotiating group which signed the agreement have stated that they no longer endorse the agreement.

This rule provides for an orderly transition to increased TED use. The initial focus is on areas and times most critical for the conservation of sea turtles and later it will expand to other important areas and times. The proposed schedule is as follows:

Season and Area Requirements

	Effective Date	Season	Area
<u>South Atlantic</u>			
<u>Offshore</u>	July 15, 1987	All year	Cape Canaveral Area to 200 miles
	January, 1988	May through August	Northern Florida to Ocracoke Inlet shore to 200 miles
<u>Inshore</u>	January 1, 1988	All year	Cape Canaveral Area to N.C.-S.C. border
<u>Gulf of Mexico</u>			
<u>Offshore</u>			
<u>Eastern</u>	July 15, 1987	All year	Southwestern Florida and Florida Keys less than 10 fathoms
<u>Western</u>	July 15, 1987	March through November	Mobile Bay to Mexico border, less than 10 fathoms

Inshore

<u>Louisiana</u>	July 15, 1987	March through November	Breton and Chandeleur Sounds
<u>Eastern</u>	July 15, 1988	All year	Southwestern Florida
<u>Western</u>	July 15, 1988	March through November	Mobile Bay to Mexico border

For the purposes of the proposed rule, the following definitions apply: inshore means marine or tidal waters landward of the baseline from which the territorial sea of the United States is measured; and, offshore means seaward of the baseline.

The July 15, 1987, starting date may be delayed to January 1, 1988, at the latest, in certain areas or for certain trawlers if NOAA determines that there are insufficient TEDs available.

On January 1, 1989, TED requirements will be extended to water depths up to 15 fathoms in the same offshore areas of the Gulf of Mexico. This will provide significant additional protection to the critically endangered Kemp's ridley sea turtle. TEDs will also be required in April and/or September 1989 north of Cape Canaveral to central North Carolina if NMFS has determined that there has been less than 80 percent total use of TEDs in these months during 1988.

Qualified TEDs

Under the proposed rule, four TEDs, the NMFS, Cameron, Matagora and Georgia, are qualified devices. Illustrations of these TEDs are in the proposed rules. These four devices have been shown to have very high turtle exclusion rates.

Trawl Efficiency Testing

The rules provide a procedure for testing additional devices for qualification. All tests for turtle exclusion will be conducted under NOAA supervision. Normally these tests will be conducted off Cape Canaveral, Florida, using a scientific protocol developed by NOAA scientists.

The negotiators wanted to encourage additional experimentation in hopes of providing even better and less costly TEDs. The proposed rule provides the Director, Southeast Region, with the authority to allow TED efficiency experiments to be conducted by private parties. NOAA has a test protocol to aid in calculating shrimp retention and bycatch exclusion rates which the experimenter can use.

Exemptions

Shrimp trawlers using a single net with a headrope of 30 feet or less, or using two nets, each with headrope lengths of 30 feet or less that are not connected to each other and are towed from opposite sides of the trawler, are exempt from TED requirements. A single independent test net with a headrope of 20 feet or less also is exempt.

Shrimp trawlers fishing for royal red or rock shrimp are exempt from TED requirements provided that 90 percent of the shrimp aboard the trawler are either of those species. Those fisheries occur in very deep water, where sea turtles are rarely encountered.

Enforcement Policy

The proposed rule notifies the public of the following interpretation and enforcement policy:

- a) shrimp fishermen who do not use TEDs in the areas and at the times required by the rules are in violation of the Endangered Species Act; and
- b) enforcement action will not be taken against shrimp fishermen who comply with the rules, even if endangered sea turtles are taken.

Economic Effects of the Proposal

The economic effects of the proposed rule are discussed in detail in the Regulatory Impact Review. This document has been provided for the record.

The annual costs for TEDs will be between \$3.7 and \$7.4 million for the entire fleet, or \$100 to \$1,200 per trawler. This range is based on a two year life for TEDs, repair costs and spare TEDs.

Based on available information we believe that there will be no significant shrimp loss. In fact, some tests on the Georgia and NMFS TEDs have shown an increased catch.

Changes in the amount of bycatch will have both positive and negative economic effect. On the positive side the undesirable bycatch such as sharks, jellyfish, and debris will be reduced resulting in a small positive benefit. However, in certain areas some of the bycatch, for example flounders and spiny lobster, are sold. Reduction in the catch of these species will result in an economic loss. Our estimate of the effect of reducing bycatch is an overall loss of revenue of between \$220,000 and \$350,000 per year for the entire industry.

A final cost is associated with reporting requirements contained in the proposed regulations. For the first year we estimate the industry-wide cost to be \$32,000 and thereafter \$20,000 annually.

The total of these costs is estimated to be between \$4 and \$8 million each year. Additionally, administration and enforcement of the program will cost an estimated \$1.6 million each year for a combined total annual cost of between \$5.6 and \$9.6 million.

Other Action

The working group did not address in detail changes beyond 1989. The agreement states that if less than 80 percent of Gulf-wide shrimp effort is with TED equipped nets, then additional requirements would be imposed to

ensure at least 80 percent of the Gulf-wide effort is covered. However, this additional requirement would be waived if, by that date, Mexico has achieved comparable use of turtle excluder gear.

The working group also recommended that conservation agreements be pursued with Mexico and other Caribbean nations. Such nations should be encouraged to require TEDs to be used by their shrimp fishermen in equivalent situations to that of the U.S. The working group also recommended that other nations be encouraged to adopt equivalent turtle conservation measures.

Conclusion

NOAA believes that the history of its actions to date are consistent with the best available data and in accordance with the provisions of the Endangered Species Act.

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TESTIMONY
OF THE
TEXAS SHRIMP ASSOCIATION

BEFORE THE
SUBCOMMITTEE FOR FISHERIES, WILDLIFE CONSERVATION
AND THE ENVIRONMENT
MERCHANT MARINE AND FISHERIES COMMITTEE

Concerning the Reauthorization of the Endangered Species Act

March 17, 1987

Mr. Chairman and Members of the Subcommittee:

I am Ralph Rayburn, Executive Director of the Texas Shrimp Association (T.S.A.), a trade association for the shrimp harvesting industry in Texas. T.S.A. also represents firms that operate outside the state. On behalf of this membership, I would like to thank the Subcommittee for allocating a portion of your agenda today to the critical issue of shrimp harvesting/sea turtle conflicts. In as much as this issue receives its power from the Endangered Species Act, it is most relevant to this meeting.

While I am quite sure that the Subcommittee members are well attuned to the issue, I would like to shed some light on my personal involvement. I have been employed by the Texas Shrimp Association for approximately nine and a half years. During that time period, at least nine years have been spent, to some degree, on the issue of sea turtle/shrimping conflicts. I have represented the shrimp industry at various forums, committees, and conferences where the issue has been addressed. In addition, I have worked with the National Marine Fisheries Service (NMFS) and the environmental community to try to develop a device that would successfully eliminate the incidental capturing of sea turtles during trawl operations.

Examples of efforts undertaken are (1) increasing the industry's awareness of the laws protecting sea turtles; (2) providing information on the proper methods of sea turtle resuscitation; (3) establishing a conduit wherein the Association assisted NMFS in compensating innovators within the shrimp industry who cooperated with NMFS in developing turtle excluding devices and (4) serving as a co-chairman of the ad hoc committee to encourage the voluntary use of the excluder devices on shrimp vessels.

Approximately two years ago, it became clear that the environmental community was becoming frustrated with the progress being made in the voluntary approach to use of turtle excluder devices (T.E.D.s). As a result of those concerns expressed, in November 1985 the NMFS Southeast Regional Director challenged the shrimp industry to begin a concentrated effort to utilize the T.E.D. The Texas shrimp industry accepted this challenge. Delays in funding and securing equipment led to a slow start, but the program was basically on line by late spring 1986.

Concurrent with this activity came rumors that NMFS was developing regulations to require the mandatory use of T.E.D.'s on board vessels. On 20 August 1986, shrimp industry representatives were called to Washington, D.C. by the N.O.A.A. Administrator . Dr. Calio announced that regulations were under consideration. During that meeting, which included representatives of the environmental

community as well, shrimp industry representatives expressed a great deal of concern on many issues such as the true impact upon sea turtles by their industry, the rejection of the voluntary T.E.D. approach for a mandatory approach without adequate evaluation of the new initiative and the absence of sound data on which to evaluate the biology, life history, and dynamics of sea turtle populations.

Two days after the meeting with the N.O.A.A. Administrator, the Center for Environmental Education filed a notice of intent to sue with the Secretary of Commerce. On August 29, the N.O.A.A. Administrator invited members of the shrimp industry, environmental community and government to mediate the conflict which had developed. The principal associations representing shrimp interests in the Southeast accepted this invitation and embarked on a series of four meeting to mediate this conflict.

Upon completion of the mediation session, all but one of the members of the mediation team signed the mediation report. The signatories signed with the qualifying statement that "We the undersigned have negotiated this agreement in good faith and agree to support its adoption and implementation." Subsequent to the signing and release of the report, NOAA representatives have sought to bind all members of any association which had representatives on the mediation team who signed the report.

While I did not serve as a member of the mediation team, I attended all but one of the mediation sessions and was aware of the tough negotiations taking place. I gained the utmost respect for all members of the mediation team for the efforts they made during the process. I also felt encouraged by the prospect of future use of mediation in solving critical issues between interest groups within the fisheries arena.

I have worked with the shrimp industry, environmental community and the government in the development of a T.E.D. -- a safe and economical T.E.D. which would still meet turtle protection standards. Some allegations have been made that currently available T.E.D.s meet these requirements but they do not. T.E.D. testing has now moved to T.E.D. use under actual fishing conditions. There have been significant shrimp losses, injuries and even turtle mortalities. Many in the shrimp harvesting industry feel that because of the publicized failures of the "state of the art" T.E.D.s that by accepting the proposed regulations mandating T.E.D. use, they are signing the execution writ for their future.

The public outcry expressed at industry meetings to date and the anticipated outcry at future public hearings on the proposed regulations is greater than ever experienced before in Gulf of Mexico fisheries. We believe this issue demands attention at the highest level because of the intensity of the interest expressed. I

believe that the shrimp industry is ready to deal with the issue of sea turtles within their area of operations. However, they cannot accept the burden which would be placed on them by implementation of the 2 March proposed rule.

During its meeting on 7 March, the Texas Shrimp Association Board of Directors expressed their willingness to cooperate in the following areas:

1. Establishment of a captive breeding facility for Kemp's ridleys.
2. Expansion of the headstarting program for Kemp's ridleys.
3. Establishment of a holistic research effort on Kemp's ridleys.
4. Support of gear research and development -- resulting in a trawl adaptation both acceptable to the shrimp industry and meeting the objective of 97% exclusion of sea turtles under certifiable test conditions.
5. Active cooperation to establish a regime for economic sanctions against those countries not meeting internationally recognized standards for the protection of endangered sea turtles.

Regarding item 5 listed above, we suggest the following language for an amendment to the Endangered Species Act:

"The Secretary of Commerce, within one year of imposing any regulation on the commercial shrimp fishery of the U.S. to reduce the incidental taking of endangered or threatened species, shall determine whether (1) the commercial shrimping activities of any nation from which shrimp or products made from shrimp are exported to the United States may result in the incidental taking of such species and (2) such nation has imposed comparable requirements on its shrimp fishery to reduce the incidental taking of such species. For purposes of making determination (2) above, the Secretary shall insist upon reliable, verified evidence that the requirements imposed by any such foreign nation on its shrimp fishery are being carried out. If the Secretary of Commerce determines that the commercial shrimping activities of any nation from which shrimp or products made from shrimp are exported to the United States may result in the incidental taking of threatened or endangered species and that such nation has not imposed requirements on its shrimp fishery, comparable to those imposed on the shrimp fishery of the United States, to reduce the incidental taking of such species, the Secretary of the Treasury shall ban the importation of shrimp or products from shrimp from such country."

This amendment is similar to the 1984 amendment to the Marine Mammal Protection Act regarding the U.S. tuna/porpoise conflict.

The T.S.A. Board of Directors believes that these positive actions will secure the survival of sea turtles without impairing the survival of the Gulf shrimp industry. Furthermore, the T.S.A. Board believes that the current proposed rules are unworkable, ineffective and unenforceable in protecting sea turtles or maintaining an economically viable shrimp industry.

The T.S.A. Board of Directors hopes that this Subcommittee will monitor the responses during the public comment period on the proposed rules and, at some later date, consider holding a comprehensive oversight hearing on this issue. I may not have covered all the points necessary in evaluating T.E.D. use and the proposed regulations because there was not adequate time between the publication of the regulations and this hearing.

Mr. Chairman and Members of the Subcommittee I trust that you will continue your record of being sensitive not only to the environmental concerns but also to the economic concerns of the fishing industry. Thank you again for the opportunity to speak to you on this issue. Julius Collins, a director of T.S.A., is here with me today. Mr. Collins has tested T.E.D.s off the Texas coast and would be pleased to answer specific questions about the devices. I would be pleased to answer any questions as well.

Margie Grunert
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Position Paper
on
The Survival of Sea Turtles

Prepared for
United States Congress
House Committee
on
Merchant Marine and Fisheries

Subcommittee on Reauthorization
of
Endangered Species Act

March 12, 1987

Prepared by: Margie Grunert, Chairman

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March 9, 1987

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General Statement

The goals of the Texas and Sea Turtle Survival Coalition are to promote the conservation and survival of all sea turtles with the least amount of risk to crew and the least amount of adverse economic impact to the shrimping industry, and to promote alternative measures to the existing trawler efficiency devices to accomplish these ends.

In this spirit we make the recommendations and observations contained in the following pages.

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Specific Areas of Concern

I. Head Start Program

- A. Program is critical in needed research effort; however certain issues must be evaluated in relation to the long-range viability of the Kemp's ridley, i.e.:
 1. Sex ratio of Head Start hatchlings: initially 97% males; now 80% female
 2. Inability to swim when released. ((currently being address with a program of "turtle aerobics").
 3. Mutations; (are the deformities genetic or are they caused by transportation and/or handling of eggs; incubation temperatures, etc.)?
 4. More studies need to be done on the physiology of mortality of these as well as stranded turtles.

B. Depletion of Wild Stock

1. Could we be weakening the gene pool by taking too many eggs from the wild, thus exaggerating any genetic flaws of the species?
2. The possibilities of such an effect could be lessened by a citizen-initiated cooperative program between the scientists from the US and Mexico, based on an assessment of needs from their scientists.

C. Captive Breeding

1. Head Start Kemp's ridleys are successfully breeding at 6-7 years of age at the Lab in the Cayman Islands.
2. After 10 years, why have no turtles returned to nest at the Padre Island National Seashore nesting site?
3. Is this site the best one for nesting? (Is it too far north; water too cold)? Too much activity by man? (Traffic, shipping, off-shore energy activity)? Pollution problems? (Out-fall of Mississippi River, other rivers and streams; chemical plant effluents; oil spills; plastics, etc., in the marine environment).

II. Increased Monitoring of US Beaches for Nesting Turtles

- A. Signs posted on public beaches.
- B. Brochures for distribution at all national, state, county and municipal beaches; at wildlife refuges, tourist information centers and Chambers of Commerce.

- B. General specific notices of turtle releases over news media, (both audio and television; newspapers, etc.), as well as formal written notices to be posted in fishhouses, post offices, places of licensing and other appropriate locations to assure efficient wide-spread heightened awareness among all segments of the population.
- C. Shrimp vessels should take part in the releases to cover large areas of simultaneous distribution to increase chances of survival.

THESE STEPS WILL RESULT IN MORE CAUTION BEING EXERCISED BY TRAWLERS AND THE GENERAL PUBLIC AS WELL.

111. Regulation of all users of the marine environment should be based on hard data rather than on estimates and extrapolations. Other causes of turtle mortality must be addressed, evaluated, managed and regulated if the shrimp industry is to be affected this way by the Endangered Species Act, with the causes prioritized to correlate with significance of impact on mortality and negative impact on Life cycle completion.

A. Is the intention of the Endangered Species Act protection or for management and regulation? Are there other bodies of legislation providing for species management more appropriate and already in place?

B. US Fish and Wildlife Service lists in this order causes of turtle mortality:

1. Long distances of migration to nesting areas and associated risks.
2. Charges man has made in beaches that prevent completion of the life cycle.
3. Man's overharvesting of sea turtle populations.
4. Pollution of coastal waters with plastics and styrofoam.
5. Activities of people on beaches; (pets, traffic, lights from condominiums, etc.).
6. Accidental captures by commercial and recreational fishermen.

C. National Marine Fisheries Service lists in this order causes other than trawling:

1. Longlining, pound nets, fish traps, gill nets and hook-and-line recreational fishing.
2. Channel dredging operations.
3. Salt water intake systems at coastal power plants.

4. Cold water stunning.
 5. Oil spills.
 6. Tar ingestions.
 7. Removal off off-shore rigs and production platforms by use of explosives.
 8. Beach and ocean pollution.
 9. Disturbance of beaches.
 10. Disturbances of nests and nesting females.
 11. Disturbance of habitat by real estate developments.
 12. Lights near beaches from developments.
 13. Poachers who harvest turtles and their eggs for food, oil, shine and shells.
 14. Natural predators such as sharks, sea birds and other sea life.
- D. The vast majority of sea turtles accidentally captured while fishing with standard trawl nets are released alive.
 - E. In trawl testing, the JFD's result in the turtles' death in 3 out of 100 captures; a small difference, without factoring in beneficial effects of standard trawling such as removal of trash and debris from ocean floor, eliminating from the turtles' environment other significant hazards.
 - F. Grossly inflated figures based on estimates from false assumptions (i.e. trawlers do not fish 24 hours a day 365 days a year) have led some turtle conservationists to the false conclusion that trawl fishing is the prime cause of turtle mortality.
 - G. Is this society begging the real questions of true effects on the marine environment of such things as loss of habitat and pollution?
 - H. Is the JFD Regulation simply a bare bone thrown out to appease the sincere conservationist and lull him into belief that the maximum has been done to insure the survival of sea turtles?
 - I. Unless all causes of turtle mortality are addressed and regulated along with the shrimp industry, under Endangered Species Act or other specific endangered species management legislation, there is the potential for a serious case of selective enforcement.
 - J. In general, what is good for sea turtles is good for all marine life; are we addressing a conservation effort with mandatory use of unproven

4.

It's which effect: only one factor of sea turtle mortality of the many cited, or are we unwittingly contributing to the demise of the one activity (shipping) which can be of great help in research to learn more about sea turtles' habits?

1. Until such basic questions are answered and issues resolved by Congress on our future treatment of all aspects of marine resources, this organization prefers other measures of enhancement to deal with the conservation and survival of sea turtles to that of imposing a new unproven item of gear that represents a whole new series of problems such as crew safety, product liability, adverse impact to food producers and their communities, states and nation, while the benefits remain dubious and unproven.

Ranch Nuevo

1. This area of Mexico along the Gulf Coast is thought to be the most important area for nesting of the Kemp's ridley sea turtle.
 - A. Approximately 90 miles of this coastline is believed to be nesting beach for this endangered turtle; yet only 9.315 miles of this beach is protected during the critical nesting period, currently with a gap in coverage during the traditional celebration of Easter in Mexico: (Holy Week).
 1. The governments of the US and Mexico must provide for the arrival of the Mexican Marines to coincide with the earliest nestings and remaining throughout the entire nesting period.
 2. Patrol of the 90 miles of nesting area should be initiated immediately; no accurate of numbers of nesting females, returning nesting females or Head Start females can ever be ascertained from monitoring on 10% of the area (and the same 10%) year after year.
 - B. The Government of Mexico should stop shrimping along the critical coastline by Mexican and Cuban trawlers during the mating and nesting periods, especially in the immediate areas where the nesting females are coming ashore to lay their eggs.
 - C. Nearshore longlining should be stopped by the Government of Mexico during mating, and nesting periods along the 90 miles of critical coastline.
 - D. Any management, protective and/or regulatory legislation in the future needs to address or be revised to provide to give special consideration and/or protection to animals whose reproductive activities occur outside the territorial jurisdiction of the US such as embargos on imports from the fisheries of nations not implementing comprehensive protective measures for endangered populations during all life cycle stages that occur in that nation's Exclusive Economic Zone, especially those who migrate into US waters, and whose fisheries are subject to regulation for protection and management of that species.

Enhancement

I. Resuscitation

- A. Change wording on NOAA poster, and print in appropriate languages: (i.e. English, French Spanish and Vietnamese, etc.).
- B. Allow more time on deck for the turtle to revive, due to many accounts of turtles appearing dead that actually revive after 2-3 hours on deck. (This would eliminate fears or fines and/or prosecution).
- C. Review procedures for the release of revived turtles, such as avoiding release during a drag or in areas of heavy fishing activity to avoid recapture, and to delay release until after the next pick-up to accomplish a successful release.
- D. Release turtles only during the times of day and areas where fishing activity is low.
- E. Develop criteria on care of turtles exposed to extremes of heat or cold while on deck. (Scientific input needed on this item).
- F. Any protective, management or regulatory legislation needs to provide for revival and resuscitation measures.

II. Rescue Operations

- A. There must be provisions for notification of Coast Guard when an injured turtle is on deck; (description of injury to be relayed to US).
- B. There must be provisions for the US to then locate the nearest person with a turtle permit to determine and verify if turtle is to be released or brought ashore.
- C. There must be provisions for the transfer of the injured turtle to a vessel headed for port.
- D. Any protective, management or regulatory legislation must provide for rescue operations.

III. Turtle Hatchery

- A. In agreement with Tee John Miazovich, President of Concerned Shrimpers of Louisiana, ISSISC recommends immediate expansion of the hatchery program with special attention to the promise of captive breeding from healthy, viable wild stock. Such a program should be funded by combinations

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of the following: the fisheries; the energy and energy-related industries; the resort and tourist industries; waterfront property owners, environmental groups, governmental agencies; Saltonstall-Kennedy monies and recreational fishing licenses. Other sources could be a 1/4% assessment on all domestic and imported shrimp. (Turtle Tax)

*Pollution Control/Removal Measures
(An Enhancement Issue)*

1. The shrimping industry would develop a pollution retrieval program in consultation with Texas A&M University Sediment Program, and Dr. Anthony Ames of the University of Texas Institute of Marine Science Research at Port Aransas, Texas.
 - A. Since most TED-clogging is due to plastics and other man-made objects, a retrieval program cannot be effective with the use of TED's. This piece of gear will increase the numbers of hang-ups that result in lost fishing rigs and add to debris cluttering up the Gulf floor.
 - B. Standard rigs on the other hand routinely catch drums, wooden pallets, tires, lengths of ship rope, large sheets of plastic, airplane parts, bombs, and other man-made debris and bring them to port, removing them from the marine environment permanently. (This incidental, routine bottom cleaning will not be possible with the TED).
 - C. The first priority will be the removal of plastics, which will not only save turtles, but whales, porpoises and other sea animals.
 - D. On-board trash:
 1. All plastics and styrofoam will be retained on board and returned to port.
 2. Other types of trash need definition as biodegradable or non-biodegradable, and will be treated accordingly.
 - E. Educational videos and brochures would be developed and distributed to all users of the Gulf.
11. Any management, protective or regulatory legislation must address the issues of enhancement measures to marine pollution and provide for options to include action programs and/or funding for pollution removal and control measures, including funding alternatives. (Trash Tax)

Specific Research Needs

- I. Monitor Boca Chica for nesting sea turtles.
- II. Correlate oil rig and platform removals, exploration, pollution, turtles and mammal strandings with shrimping effort as these factors relate to turtle mortality. It has been noted by both NMFS and the shrimp industry that the highest incidence of turtle mortality coincides with the lowest point of fishing effort in the Gulf of Mexico. It has also been noted that combined turtle and mammal strandings have occurred after oil platform removals involving explosives.
- III. Pollution studies should continue with regard to all users of the marine environment. All shrimp and sea turtle need a healthy, viable, productive environment to thrive and flourish.
- IV. A determination of the Kemp's ridley sea turtle's genetic viability for survival in the wild must be made. (Can a viable population be increased from a limited breeding stock with a depleted gene pool)?
- V. A better data base relative to sea turtles must be developed, if the shrimp industry or any other user is to be managed around the Endangered Species Act, or any other management, protective or regulatory legislation. Any management plan must include and take into account all causes of turtle mortality and regulate and manage all fairly and evenly. This improved data base must be developed by a comprehensive research effort conducted by scientists in cooperation with the shrimp industry, other affected Gulf users and interested parties.

JED Testing Requirements

- I. *Test for shrimp loss and performance, including safety of operation in July and August, 1987, when shrimp production is high.*
- II. *Provide four NAIS mini-JED's and four Georgia JED's.*
- III. *Provide one Seafront and one NAIS agent to operate and care entirely for the JED-side, including the heading of JED-caught shrimp.*
- IV. *The duration of the test is to be a full 30-35 day voyage on a freezer vessel.*
- V. *The JED-caught shrimp and the standard rig-caught shrimp are to be kept separate.*
- VI. *All JED-testing has be done by comparing shrimp production on the JED-side to the standard rig-side. This has been done for determining the need to adjust and fine-tune the JED-rig. To simulate real-life performance as if pulling four JED-rigs, the organization recommends that no weighing be done during the voyage. All shrimp bags are to be color-coded and tagged "Standard" or "JED" and labeled for drag-number.*
- VII. *The boat owner and the crew are to be reimbursed the difference if a loss occurs. True estimates of potential losses based on prior years' earnings range from \$100,000.00 down to \$50,000.00. A 10%-40% loss would range from \$20,00.00 down to \$2,500.00 for this voyage.*

Concluding Remarks

This organization is very grateful for our democratic form of government, in which Congress provides through public process, comment on pending or proposed legislation. In this case, the organization opposes the proposed action on the basis of insufficient statement of need, inadequate data base to justify the implementation of regulation and the absence of a vehicle for the management of endangered species, some of which have critical life cycle stages outside the US jurisdiction.

Our organization's hope is that this airing of the endangered species issue will lead Congress to address all issues of marine ecology with an eye to fairness for all in the future. We share our marine resources with the world and are stewards of this precious non-renewable natural resource. Let us leave our waters better than we found them for our legacy to future generations.



Center for
Environmental
Education

TESTIMONY OF
MICHAEL WEBER
VICE PRESIDENT FOR PROGRAMS
CENTER FOR ENVIRONMENTAL EDUCATION
BEFORE THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION
AND THE ENVIRONMENT

March 17, 1987

Whale Protection Fund • Seal Rescue Fund • Sea Turtle Rescue Fund • Marine Habitat Program

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I wish to express my sincere appreciation to the Chairman and his colleagues on the Subcommittee on Fisheries and Wildlife Conservation and the Environment for inviting the Center for Environmental Education to present testimony regarding the reauthorization of the Endangered Species Act and the conservation of endangered and threatened sea turtles.

When you have heard my testimony and reviewed the materials I submitted with it, I anticipate that you will agree with us on the need to take dramatic action to reduce the incidental capture of sea turtles in shrimp trawls. I ask that you join with us in supporting the recent efforts of the National Marine Fisheries Service (NMFS) to achieve this objective.

Ending the drowning of sea turtles in shrimp trawls will contribute more to their conservation and recovery than any other action we can take. This action will, we submit, be a signal achievement of the Endangered Species Act.

History and Background

For seven years, the Center for Environmental Education has supported activities directed at promoting the recovery of endangered and threatened sea turtles around the world. We have sought to address every major type of threat facing sea turtle populations, whether the threat be from imprudent coastal development near the nesting beaches of sea turtles, from exploitation for international trade, from incidental capture in fisheries, or from burgeoning coastal populations in the very same tropical areas inhabited by sea turtles.

The very first threat to sea turtles that we sought to ameliorate was their incidental capture in shrimp trawls. And though that was seven years ago, we were only newcomers to the issue. I refer you to Exhibit A for a detailed history of efforts to reduce incidental capture of sea turtles.

Several years after the Kemp's ridley, leatherback, and hawksbill sea turtles were listed as endangered under the Endangered Species Act in 1970, the National Marine Fisheries Service (NMFS) considered prohibiting shrimp trawling in areas adjacent to nesting beaches. In 1973, Dr. Peter C.H. Pritchard and Rene Marquez M., two scientists who had worked for years to promote the recovery of the endangered Kemp's ridley, had concluded that shrimp trawling was the gravest threat to the species' survival (Exhibit F).

When NMFS listed the olive ridley, green, and loggerhead sea turtles under the Endangered Species Act in 1978, the agency identified incidental capture in shrimp trawls as a significant cause of mortality for sea turtle populations off the southeastern United States (Exhibit B). NMFS had already begun a program of research to develop a technological solution to this problem.

In September of 1980, I attended a meeting with other

conservationists, shrimp industry representatives, and government officials in Charleston, South Carolina. The purpose of the meeting was to discuss means of reducing the capture of sea turtles in shrimp trawls. That year, there had been especially high numbers of turtles that stranded on beaches from North Carolina to Texas.

At that meeting, NMFS revealed that it had hit upon a possible technological solution to the incidental capture of sea turtles. The Turtle Excluder Device, as it was called, had proven itself capable of reducing the capture of sea turtles by 97 percent and increasing the shrimp catch by seven percent. I do believe that everyone in the room felt as if we had just been spared the kind of deep controversy that had marked the capture of porpoise in tuna purse seines just a few years earlier.

I will leave it to the witnesses from NMFS to describe the many outreach activities the agency conducted over the years in an attempt to encourage TED use. The Center for Environmental Education not only provided several fishermen in South Carolina with these early TEDs, but also had an economic cost benefit analysis performed on the TED. The cost benefit analysis indicated that a shrimp fisherman who invested in TEDs would enjoy a significant economic benefit over the two-year life of the TED.

The fishermen who used the device, however, complained that it was too heavy and was dangerous in heavy seas. The Center passed this information along to NMFS and NMFS, acting on this and on criticisms from other fishermen, reduced the weight of the NMFS TED from 97 to 37 pounds and made it collapsible on deck.

NMFS also added a feature that reduced the incidental catch of finfish by 50 to 70 percent. Each year, shrimp fishermen in the Gulf of Mexico alone have to cull through more than a billion pounds of finfish to find a quarter billion pounds of shrimp. NMFS believed that fishermen would be more inclined to use TEDs because they would reduce the by-catch, thereby reducing labor and fuel costs. While the new design did not lose shrimp, it did not increase shrimp catch as the earlier bulky design had.

In 1982, I convened a working group of environmentalists and industry representatives to promote the voluntary use of TEDs. Over the next several years, this group met periodically, and late in 1983, we agreed to aim for 50 percent use of TEDs in the fleet by November 1986. By mid-1985, however, it was clear that we would not reach this goal. Less than one percent of the fleet was using a TED of any type at any time.

At the final meeting of the TED promotion group in November 1985, the environmental members of the group asked the industry representatives to commit some of their members, at least, to using TEDs at some point before November 1986. At the time, we knew that less than one percent of the fleet was using TEDs at any time. The industry representatives could not make such a commitment. In December 1985, I wrote to the Southeast Regional Director of NMFS and requested that the agency begin the process of proposing regulations to require TEDs in all waters at all times.

(Exhibit O). The Regional Director refused to propose regulations.

In December 1985, the U.S. Sea Turtle Recovery Team also recommended to the Southeast Regional Director of NMFS that TEDs be required on shrimp trawls in all waters at all times (Exhibit D). The Team had identified incidental capture as a major concern in the recovery plan that NMFS approved in the fall of 1984. The continuing decline of the Kemp's ridley turtle, in particular, and the resistance of the shrimping industry to voluntary use of TEDs led the team to change its position from one of encouraging voluntary use of TEDs to one of requiring TEDs.

In January 1986, the Center for Environmental Education and the U.S. Fish and Wildlife Service requested the Gulf of Mexico Fishery Management Council to amend its fishery management plan for shrimp by requiring that TEDs be used throughout the fishery at all times (Exhibit P). In the shrimp plan, the Council had recognized the problems of incidental capture of endangered and threatened sea turtles and of commercially and recreationally valuable finfish. The Council had decided, when it finalized this plan in 1981, to call for an education program for shrimp fishermen about sea turtles and for the development of gear that would reduce the by-catch of finfish in shrimp trawls.

The U.S. Fish and Wildlife Service shares responsibility for sea turtles with NMFS and has for the last eight years supported efforts in Mexico to protect the nesting beach of Kemp's ridleys at Rancho Nuevo. Despite nearly complete protection of the nesting females and eggs on this beach, Fish and Wildlife Service data showed that the number of nesting females had continued to decline at a rate of eight percent a year since 1978. In contrast to the 40,000 adult ridleys that nesting on the beach on one day in 1947, no more than 170 ridleys nested on one day in 1985. The Fish and Wildlife concluded that unless shrimp trawling were eliminated as a source of mortality for the species, the Kemp's ridley would continue to decline in numbers.

Our request to require TEDs in the Gulf shrimp fishery was endorsed by a broad range of groups. However, the Gulf Council did not respond to these requests.

By August 1986, we had concluded that we would have to make it very clear to NMFS and to the industry just what their responsibilities were under the Endangered Species Act, if we were to make any progress. Late in August we met with NOAA Administrator Anthony Calio and representatives of the shrimp industry. The focus for the meeting was a set of draft regulations prepared by NMFS that would have required that TEDs be used in some large areas in the Gulf of Mexico and near the Cape Canaveral Channel in the Atlantic at all times and in all depths. We didn't believe that the draft regulations went far enough in protecting Kemp's ridleys, particularly, since there were no TED requirements off Texas between Aransas and just east of Galveston. The industry thought the draft regulations were too restrictive. From the remarks of several of the industry representatives we concluded that the voluntary use program was indeed just a pipedream.

The next day, the Center for Environmental Education notified the Secretary of Commerce that he was violating the Endangered Species Act

and that to comply with the Act he would either have to require TEDs in all waters at all times or close the fishery (Exhibit O). We also indicated to Dr. Calio that we were willing to enter into additional meetings with the industry if a professional mediator were present to facilitate our discussions.

Soon afterwards, we entered into a series of four meetings that lasted fourteen days and were facilitated by Larry Cotter, a professional mediator from Alaska (Exhibits R, S, and T). Let me just say that we entered these negotiations with considerable trepidation. As we suspected beforehand, considerable compromise was necessary for us to reach an agreement with the industry on a plan for phasing in use of TEDs. One of the principal benefits we believed would derive from a negotiated agreement was that it would receive greater compliance by the fleet since the fleet's interests had been fully and aggressively represented. Nonetheless, we are left somewhat concerned whether we have done enough for the conservation of endangered and threatened sea turtles.

I will not here go into great detail about the agreement. However, I do wish to discuss briefly what compromises the environmental community's representatives made in the negotiations. First, we wanted to see the by-catch of finfish in the shrimp fishery reduced. The NMFS TED could reduce this catch by 50 percent. But there are no requirements for finfish reduction in the agreement or in the proposed regulations.

Second, we are convinced that sea turtles, especially adult female Kemp's ridleys, will be caught and drowned in the deeper waters off Texas. Yet, the agreement and the proposed regulations do not require TEDs in deeper Texas waters.

Third, we wanted TEDs used in all waters at all times beginning this year. Instead, the agreement and the proposed regulations propose that requirements to use TEDs be phased in over the next three years in some areas at some times. In Louisiana, we even agreed to a further delay in TED requirements. However, the representative of the Concerned Shrimpers of Louisiana, whose concerns we addressed in this additional delay, did not sign the agreement. Therefore, this provision of the agreement is not now in effect.

Other Issues

As I have travelled in the Southeast recently and have read news accounts of opposition to the negotiated agreement and the proposed regulations, I have been struck by the misrepresentations and misstatements of fact and opinion upon which opponents of the agreement have been building the opposition. I would like to take up some of these at this time and refer you to the materials I have submitted with this testimony for greater detail.

Sea Turtles Are Threatened With Extinction

The most reliable indicator of the health of sea turtle populations is the trend in the number of nesting adult females. Only adult females can be regularly counted since only adult females leave the water for

beaches, where they can be easily observed. Adult females are also the most important segment of the population, since their reproductive effort is key to increases or decreases in a population. Declining numbers of adult female turtles will inevitably lead to declining numbers of turtles in the total population.

The number of adult female Kemp's ridleys has fallen by more than 99 percent in 40 years. In 1947, more than 40,000 adult females nested on one day; last year no more than 167 nested on a single day. The nesting population has been declining steadily for the last ten years despite extensive protective efforts on the nesting beaches. Knowledgeable scientists have concluded that capture in shrimp trawls has significantly contributed to this decline.

The number of young Kemp's ridley turtles does seem to be increasing, but there is little more than anecdotal evidence to support this. In any case, these animals will not become sexually mature and able to contribute to growth in the sea turtle population for as many as thirty years. Only a fraction of them will survive to reproduce.

Hawksbill, green, and leatherback sea turtles, which are listed as endangered under the Endangered Species Act, are similarly reduced in numbers. Loggerhead sea turtles, which are listed as threatened under the Endangered Species Act, are more numerous. But even those loggerhead populations that have been studied for the longest period of time—about 20 years—are also declining at an annual rate of three percent.

After a thorough review of the status of endangered and threatened species of sea turtles in 1984, NMFS decided not to change the status of any populations in U.S. waters.

Estimates of Sea Turtle Captures and Drownings Are Reliable

I have often been asked why fishermen chose not to use a device like the TED, which could save turtles and offer them some benefits as well. The reasons I have heard fishermen cite for not using TEDs over the years would fill a sizeable book. Many fishermen don't use TEDs because they don't see the problem. If sea turtles were as abundant now in the Gulf of Mexico as they were even a few decades ago, fishermen would catch sea turtles more frequently and would be more inclined to accept that there is a problem. I have found that Atlantic fishermen more readily admit that their captures of sea turtles might be a problem for sea turtle populations; I think this is because Atlantic fishermen capture sea turtles about eight times more frequently than do fishermen in the Gulf. The greater frequency of sea turtle captures in the Atlantic is due to the greater numbers of sea turtles there, particularly loggerhead sea turtles.

The capture of sea turtles in the Gulf has not always been an infrequent occurrence. In interviews conducted by Dr. Archie Carr in the early 1950s, shrimp fishermen operating out of Port Isabel, Texas had remarked that Kemp's ridleys were abundant. Mauerman and Cox spoke with a fisherman in Port Isabel who said that in the 1940's and 1950's, it was not unusual to catch 45 to 55 turtles in a season. All of this changed, of course, as populations of sea turtles in the Gulf declined. In inter-

views with fishermen in 1976, Mauerman and Cox (Exhibit G) found that by the mid-1970s shrimp fishermen operating out of Port Isabel, Texas were capturing three to four Kemp's ridleys each season.

Now, as sea turtle populations in the Gulf have continued to decline, incidental capture of turtles in trawls has become even less frequent. However, if every commercial shrimp fisherman in the Gulf catches just two turtles each year, more than 30,000 sea turtles will be caught in the Gulf alone.

NMFS estimates that shrimp fishermen capture 47,970 sea turtles each year. Of these, an estimated 11,180 die. NMFS' estimates of sea turtle captures and drownings are based upon standard scientific and statistical techniques. The data and literature supporting these estimates is extensive. Critics of these estimates have provided no systematic, persuasive critique of the techniques or the literature.

NMFS' estimates of sea turtle deaths in shrimp nets are conservative, since NMFS assumes that fishermen revive most captured sea turtles, if possible, before returning them to the water. However, neither NMFS nor the industry have presented evidence to support this assumption.

Shrimp Fishing Remains a Major Threat to Sea Turtles

The status of sea turtle populations has been affected by many other human activities, including beachside construction, marine pollution, and direct exploitation. Through the implementation of state and federal laws, the effects of many of these activities have been substantially reduced. Both private and governmental organizations continue to address these problems aggressively.

As an example, nesting beaches for Kemp's ridley sea turtles in Mexico have been well protected since 1966 by Mexico and with the assistance of the U.S. Fish and Wildlife Service and volunteers since 1978. Human poaching and predation of nests by coyotes has been virtually eliminated. There is little more that can be done on the nesting beaches in Mexico.

Dr. Peter C.H. Pritchard and Rene Marquez, the two scientists most knowledgeable about Kemp's ridley sea turtles, have concluded that incidental capture in shrimp trawls is the most serious problem confronting Kemp's ridleys. Other scientists concur that incidental capture and drowning in shrimp trawls is the largest single source of mortality for juvenile and adult marine turtles in the southeastern U.S. A recent study concluded that southeastern loggerhead populations would continue to decline, unless incidental drowning were eliminated.

Likewise, the U.S. Sea Turtle Recovery Team, which includes experts on sea turtle biology and other relevant matters, has concluded that incidental capture in shrimp trawls is a major problem for all species.

TEOs Help Fishermen

TEOs provide many benefits. The most important is that TEOs help fishermen avoid the capture of endangered sea turtles and consequent

violations of state and federal laws.

By excluding hundreds of pounds of non-target marine life, including jellyballs, sharks, rays, and finfish, TEDs allow a fisherman to tow for a longer period of time, enabling him to catch more shrimp per tow. Indeed, fishermen using TEDs can fish in some areas in which other fishermen cannot fish because of large concentrations of non-target species of marine life.

Reports that TEDs have lost shrimp have been based on very limited testing. In most cases, adjustments in the deployment of the gear have eliminated any losses. In several cases, fishermen had not followed installation instructions.

In 12,000 hours of testing in the Gulf of Mexico and the South Atlantic, trawls equipped with the NMFS TED have shown no statistically significant loss of shrimp. Georgia Sea Grant reports that, on average, trawls equipped with the Georgia Jumper have caught more shrimp than standard trawls in limited testing.

TEDs Are Not Dangerous

Some opponents of TED requirements allege that TEDs are dangerous. This notion derives principally from experiences with earlier, much larger NMFS' TEDs, which weighed 97 pounds and were very bulky. The final NMFS TED design weighs only 37 pounds and is much smaller. Also, the proposed regulations will permit the use of other types of TEDs, which are even less bulky and lighter than the NMFS TED. No one has alleged that these other devices are dangerous.

Several stories about TED-caused injuries have circulated through the industry. According to one, a crewman on a Texas vessel was injured by a new NMFS TED. As it turns out, this injury was due to negligence in attaching a hook properly. Another story has it that a fisherman was killed when trying to retrieve his nets with TEDs. Upon further checking, we learned that there were no TEDs in the nets or on the vessel when the accident occurred.

Like any piece of gear, including trawl doors weighing hundreds of pounds and power winches, TEDs require some care in their use.

It is sometimes alleged that the use of TEDs will lead to increased insurance premiums for vessel owners. As a matter of fact, some shrimp fishermen have had their premiums reduced when they used TEDs. This reduction was due to the reduction in the number of crewmen needed to cull shrimp from hundreds of pounds of finfish, jellyballs, sharks, and rays caught in standard trawls.

We Can Do More for Turtles By Using TEDs Than By Rearing Sea Turtles in Captivity

Critics of the agreement have suggested that more can be done for turtles by headstarting young turtles and releasing them than by requiring TEDs. Those scientists most familiar with headstarting techniques and with the status and biology of Kemp's ridley and other sea

Standardizing stranding surveys	\$160,000
Port interviews with fishermen	\$100,000
At-sea verification	\$100,000
Assessment of impacts on turtles and industry	\$100,000

2) **Species Biology and Population Assessment:** Lack of information on the distribution and incidental capture of sea turtles in some areas has hampered making decisions regarding the impact of shrimp trawling upon endangered and threatened sea turtles. We are particularly concerned about the Gulf offshore distribution of Kemp's ridleys, the most critically endangered of sea turtle species. New information must be developed and old, unanalyzed information reviewed and synthesized. Tasks include:

Tagging and recapture	\$80,000
Remote sensing (with USFWS)	\$130,000
Analysis of aerial survey data	\$100,000
Enhancement of stranding network	\$40,000
Evaluation of inshore data	\$50,000

3) **Certification of New TED Designs:** The negotiated agreement provides for the use of four different TED designs, including one developed by NMFS. Additional designs have already been identified but must be tested before being certified as meeting the standards of the regulations. This funding will allow NMFS to provide advice to private parties wishing to conduct initial testing. NMFS will also be able to conduct final certification tests.

Conducting final TED tests	\$100,000
----------------------------	-----------

ENFORCEMENT + 9PTE + \$675,000

The credibility and effectiveness of the regulations implementing the TED agreement rest partly on enforcement. At this time, NMFS' enforcement capabilities are not equal to this task. In Texas, for instance, where TEDs will be required in some depths of water and not in others, the enforcement burden will be particularly great. Yet, NMFS has only one enforcement agent in Texas. We are suggesting that a total of nine special agents be added to NMFS staff at a total cost of \$75,000 each, including support services and materiel. We suggest that Texas receive two additional agents, Louisiana three, Florida two, Georgia one, and South Carolina/North Carolina one.

The funding needed for implementation of the agreement will decrease over the next three years as the program is phased in.

Conclusion

I believe that we now have a workable framework for ending the drowning of sea turtles in shrimp trawls. The negotiated agreement and the proposed regulations reflect a good-faith effort to forge a solution to this controversial issue. Without the structure and certainty of the Endangered Species Act, this solution would have been inconceivable. I urge your support of the Endangered Species Act and of this agreement.

Thank you for your consideration.

AN ANALYSIS OF THE
CAPTURE, MARKETING AND UTILIZATION OF MARINE TURTLES

BY

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the National Fisheries Institute estimates that 200,000 to 250,000 pounds were imported. If Prelude Foods' imports for that year (126,200 pounds) are added to that figure, the total jumps to 326,200-376,200 pounds. Not included in this total or the 1974 total are imports from Cayman Turtle Farm itself. Those data are unavailable for those years. However, in 1976, the Company imported at least 214,000 pounds and in 1977 at least 175,000 pounds. If only half those amounts were imported in 1974 and 1975, the total quantity of green turtle meat imported into the U.S. for those years was greater, and possibly much greater than in the base year of 1973. Finally, further evidence of the dramatic expansion of the turtle meat market in the U.S. is the request of one company for permission to import some 600,000 to 900,000 pounds of green and olive ridley turtle meat in 1978. Even though that request was apparently denied, it is clear that turtle meat importers see a large and growing demand for turtle meat in the U.S.

The above discussion represents only a partial evaluation of the green turtle import market for the years subsequent to 1973. Unfortunately, the sort of comprehensive analysis of import declarations which King did for 1973 is no longer possible. In 1974, Interior ceased to keep a central file of these declarations, and they are now kept at the various ports of entry."

HARVEST AND USE OF SEA TURTLES IN THE U.S.

Available data in various reports on the landings of turtles in the U.S. indicate that they have been of importance for almost 100 years. The data are not continuous in nature and probably are a low estimate of total turtle production. They probably do serve as guides in pointing out important geographical areas of importance and of overall trends. The data are not detailed on the use of turtles and eggs and in most cases only estimate round weight (whole weight) of turtles landed.* Another factor making the data somewhat misleading is the fact that a considerable proportion of the Caribbean production in the 1940's and 1950's was landed in Florida and this is included in the U.S. landings as indicated by Rebel (1974).

* It is assumed that these data do not include turtles sold directly to retailers by fishermen.

This discussion of U.S. landings and use patterns will be presented in four sections. First, historical and time series data for the total U.S. will be presented. The next two sections will focus on landings by states in the U.S. The second section will cover states other than Florida. Available data are more complete for Florida and since most turtles appear to have been landed there, the third major section will cover Florida in detail. Finally, some data are reported on the catch of turtles by gear type and these data will be discussed for Florida, Hawaii and Puerto Rico.

United States Use and Landing Patterns

Green Turtles

Landings of green sea turtles in the United States since 1950 have ranged from a low of one thousand pounds in 1955 to a high of 421 thousand pounds in 1970. Landing patterns have been somewhat erratic during the last 25 year period for which data are shown (Table 4 and Figure 3). From 1950 to 1959, green turtle landings were under 15 thousand pounds each year with the exception of 1952 when 97 thousand pounds were reported. From 1960 to 1966, landings were fairly constant at slightly over 30 thousand pounds with the exception of 1963 when landings were 55 thousand pounds. Landings became highly erratic between 1967 and 1974 when they ranged from a low of 14 thousand to 421 thousand pounds in 1969 and 1970, respectively. Total value of green turtle landings has been fairly low due to the apparent low round weight price of turtles. Total value was highest in 1977 at \$91,000, but other than that year was never over \$34,000. Most years total value was much lower still.

These landings of green sea turtles should be considered minimum estimates. Some green turtles are probably included in the unclassified turtle landings reports (Table 4). Landings of unclassified turtles ranged from one thousand to 74 thousand

Table 4. Total landings of green sea turtles in the U.S. 1950-1974^b

Year	Pounds	Dollars
-----Thousands-----		
1950	7 (74)	1 (5)
1951	9 (74)	1 (5)
1952	97 (74)	14 (5)
1953	15 (74)	2 (5)
1954	3 (74)	a (3)
1955	1 (21)	a (2)
1956	5	1
1957	4 (1)	1 (a)
1958	9	1
1959	12	1
1960	31	4
1961	36 (1)	6 (a)
1962	31 (1)	4 (a)
1963	55 (1)	9 (a)
1964	33 (1)	4 (1)
1965	31 (4)	5 (a)
1966	31 (7)	5 (1)
1967	154 (6)	25 (1)
1968	64 (4)	14 (2)
1969	14 (9)	3 (3)
1970	421 (13)	91 (5)
1971	133 (20)	33 (10)
1972	137 (23)	34 (11)
1973	52 (1)	17 (a)
1974	29 (2)	6 (a)

^a Less than 500 dollars.

^b Numbers in parentheses are landings and values of unclassified turtles which may include some green sea turtles.

Sources: (1) Rebel (1974).

(2) U.S. National Marine Fisheries Service, Fishery Statistics of the U.S., 1972-74.

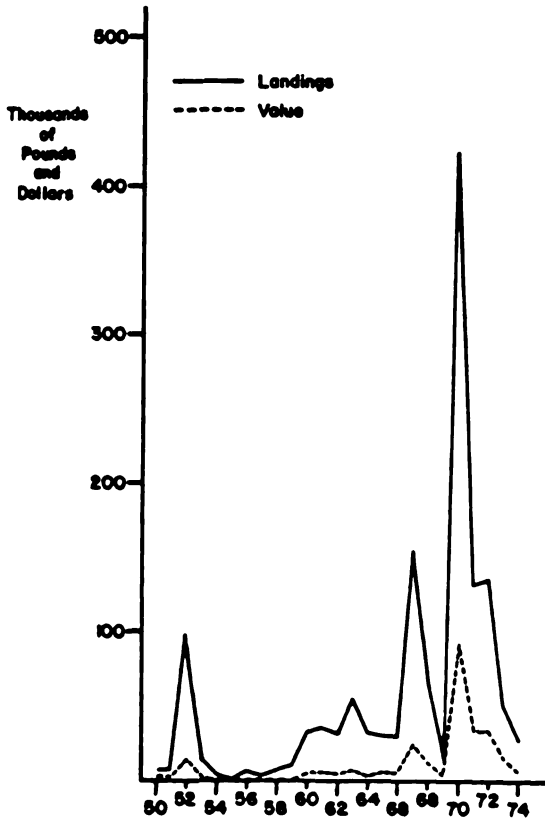


FIGURE 3. LANDINGS AND VALUE OF GREEN TURTLES IN THE U.S., 1950-1974.

pounds from 1950 to 1974. This category was usually quite low relative to green turtle landings each year.

Balazs (in lit., Sept. 10, 1973) reported a sharp increase in green turtle landings in Hawaii. From a low of 380 pounds in 1963, 25,583 pounds were caught in 1972. Over 12,000 pounds were reported caught during the first three months of 1973 - and turtles taken for home consumption were not reported.

Loggerhead Turtles

Landings of loggerhead turtles have always been much lower than green turtles. Landings between 1962 and 1974 ranged from a low of one thousand pounds in 1969 to a high of 44 thousand pounds in 1973 (Table 5). Landings of green turtles in 1973 were 52 thousand pounds. On a relative basis, loggerhead landings for all other years have been much lower than green turtle landings. The other two "high" years for loggerhead landings were 1970 and 1971 when landings were 26 and 27 thousand pounds respectively. Green turtle landings also showed a dramatic one-year rise in landings in 1970.

Processed Turtle Products

Very few data are available on the use of sea turtles in processed products other than that aggregated with terrapins and all other kinds of turtles. The number of plants that processed turtle products in the U.S. ranged between four and ten in number for the years between 1948 and 1969 (Table 6). The numbers after 1969 are not shown in the data sources. No data are available on employment in these plants. These plants produce primarily turtle meat, soup and stew in canned form. An additional small number of firms on an isolated basis probably handled sea turtles in fresh and frozen form.

Pounds of fresh and frozen meat handled are shown for selected years from 1963 through 1974 (Table 6). Data for some years are included with unclassified turtle products. A total of slightly over 44 thousand pounds worth \$31 thousand was handled in the peak year of 1966. The lowest volume year was

Table 7. Landings of turtles in Georgia, Hawaii, Louisiana, Mississippi, North Carolina, Texas, Virginia and Puerto Rico for selected years^d.

State	Year	Pounds	Dollars
Georgia	1897	1,000	20
	1918	11,250	100
Hawaii	1948	17,650	2,154
	1949	15,168	2,016
	1950	11,588	1,733
	1951	5,144	1,050
	1952	2,731	533
	1953	9,466	2,214
	1954	3,040	483
	1955	11,126	1,731
	1956	6,819	1,025
	1957	696	195
	1958	3,207	1,171
	1959	714	90
	1960	3,739	527
	1961	709	139
	1962	477	48
	1963	380	75
	1964	1,609	321
	1965	1,510	57
	1966	4,715	1,053
	1967	5,021	1,173
	1968	3,063	2,400
	1969	7,202	2,821
	1970	11,869	5,017
	1971	19,204	9,851
	1972	23,477	10,587
	1973	18,367	7,815
Louisiana ^a	1880	30,000	1,200
	1890	90,793	2,335
	1918	4,360	218
	1925	8,650	173
	1932	6,450 ^b	129
	1933	145,000	6,000
	1936	3,500 ^a	70
	1948	11,600	1,740
	1949	5,800	630
	1950	4,800	466
	1951	2,800	280
	1952	10,500	1,311

Table 7. Landings of turtles in Georgia, Hawaii, Louisiana, Mississippi, North Carolina, Texas, Virginia and Puerto Rico for selected years^d(Continued).

State	Year	Pounds	Dollars
Louisiana ^a (cont'd)	1953	2,600	263
	1954	1,400	210
	1955	200	20
	1956	4,300	598
	1957	200	20
	1958	3,500	286
	1959	4,600	250
	1960	6,200	415
	1961	6,300	813
	1962	3,300	199
	1963	2,200	223
	1964	3,000	420
	1965	6,000	1,000
	1966	3,300	407
	1967	2,000	(c)
	1968	1,000	(c)
	1969	2,000	(c)
	1970	2,000	(c)
	1971	8,000	(c)
	1972	3,000	1,000
Mississippi	1918	337	20
North Carolina	1897	24,000	1,920
	1918	8,400	77
Texas	1880	24,000	720
	1889	82,800	1,409
	1890	83,000	1,390
	1918	6,671	447
	1925	2,550	204
Virginia ^a	1948	2,800	156
	1949	600	18
	1950	6,900	138
	1951	1,200	22
	1952	6,900	169
	1953	6,400	128
	1954	5,100	51
	1955	2,600	52
	1956	4,400	44
	1957	1,600	16

Table 7. Landings of turtles in Georgia, Hawaii, Louisiana, Mississippi, North Carolina, Texas, Virginia and Puerto Rico for selected years^d (Continued)

State	Year	Pounds	Dollars
Virginia ^a	1958	1,200	88
(Cont'd)	1959	2,200	22
	1960	1,600	16
	1961	1,100	11
	1962	600	6
Puerto Rico	1971	25,700	10,067
	1972	18,600	8,563
	1973	19,000	9,477

^a Principally green turtle

^b Loggerhead only

^c less than 500 pounds

^d no states report landings after 1973

Sources: (1) Rebel (1974) for data on Georgia, North Carolina, Louisiana, Texas and Mississippi through 1966.
 (2) U.S. National Marine Fisheries Service, Fishery Statistics of the U.S., 1962-74.
 (3) Balazs (1973) for data on Hawaii from 1948 to 1961.

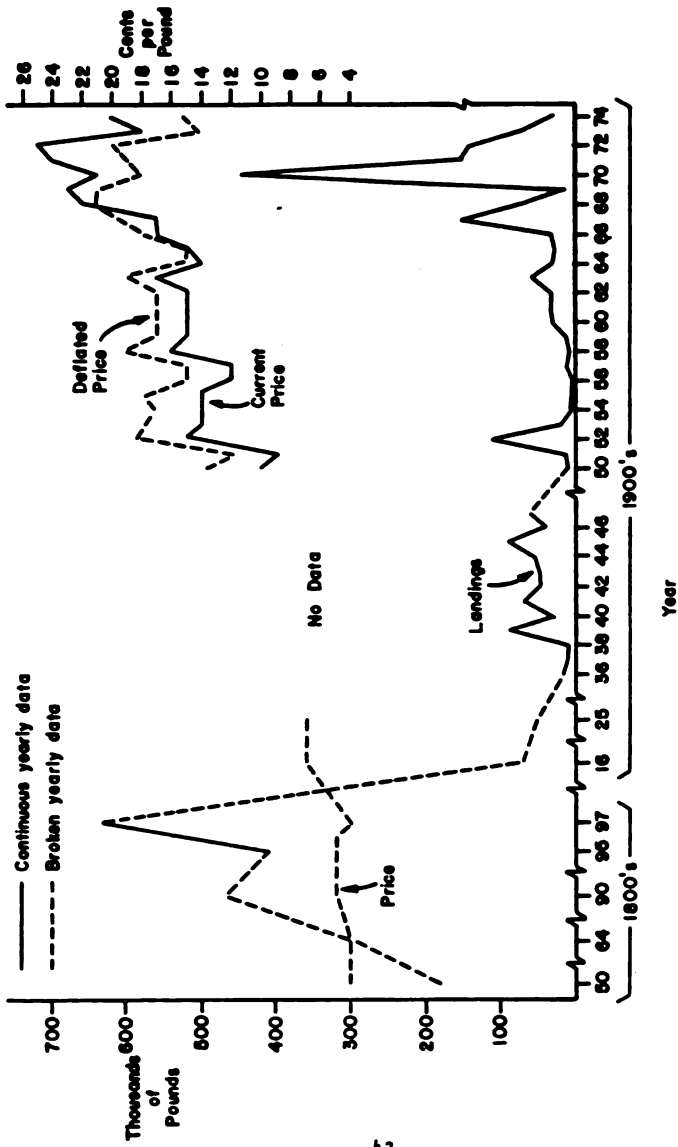


FIGURE 6. LANDINGS AND PRICE OF SEA TURTLES LANDED IN FLORIDA FOR SELECTED YEARS FROM 1880 TO 1974.

Table 9. Landings and value of green turtles in Florida, 1950-1974^a

Year	East Coast		West Coast		Total	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
1950	3,000	300	6,800	680	9,800	980
1951	300	30	6,000	600	6,300	630
1952	1,048	157	88,213	13,232	89,261	13,389
1953			12,368	1,855	12,368	1,855
1954			1,745	262	1,745	262
1955	55	8	1,286	193	1,341	201
1956	202	30	646	97	848	127
1957	348	52	4,475	671	4,823	723
1958	268	43	4,565	730	4,833	773
1959			6,620	993	6,620	993
1960	952	143	19,876	2,981	20,828	3,124
1961	200	30	30,206	4,531	30,406	4,561
1962	835	125	26,615	4,168	27,450	4,293
1963	480	120	51,487	9,117	51,976	9,237
1964			29,639	4,274	29,639	4,274
1965			24,915	3,668	24,915	3,668
1966	210	42	28,511	5,200	28,721	5,242
1967			151,643	25,401	151,643	25,401
1968	100	10	62,855	14,319	62,955	14,329
1969	145	51	12,218	2,956	12,363	3,007
1970	8,380	7,301	410,455	90,562	418,835	91,863
1971	5,162	1,290	120,542	30,137	125,704	31,427
1972	6,347	1,284	128,081	32,133	134,428	33,417
1973	32,460	3,252	10,170	1,525	34,398	9,045
1974	9,154	1,478	17,512	4,368	26,666	5,846

^a No landings after 1974.

Sources: (1) Rebel (1974).

(2) Florida Department of Natural Resources, Summary of Florida Commercial Marine Landings, 1972-74.

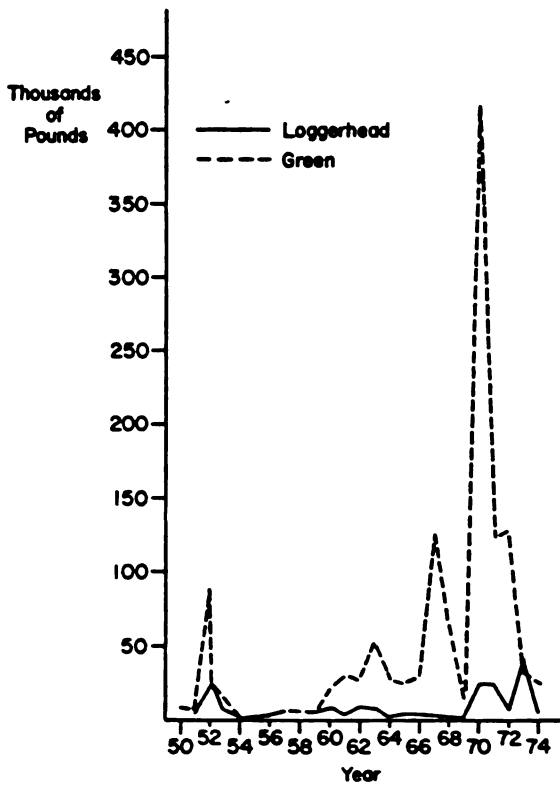


FIGURE 7. LANDINGS OF GREEN AND
LOGGERHEAD TURTLES IN
FLORIDA, 1950 - 1974.

Table 10. Landings and value of loggerhead turtles in Florida 1951-1974*

Year	East	Coast	West	Coast	Total	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
1951	100	8	4,100	336	4,200	344
1952	941	122	26,319	3,421	27,260	3,543
1953			8,390	1,091	8,390	1,091
1954			500	50	500	50
1955			211	21	211	21
1956	696	70	1,059	106	1,755	176
1957			5,105	510	5,105	510
1958						
1959	4,015	602	100	15	4,115	617
1960	2,640	396	7,204	1,081	9,844	1,477
1961	1,005	151	2,655	398	3,660	549
1962	1,525	229	6,641	701	8,166	930
1963			8,057	1,026	8,057	1,026
1964			1,124	112	1,124	112
1965	2,200	330	1,200	120	3,400	450
1966	3,854	386	114	11	3,968	397
1967	2,010	201			2,010	201
1968	844	73	1,906	178	2,750	251
1969			673	37	673	37
1970	3,722	563	22,167	2,623	25,889	3,186
1971	9,699	2,469	15,906	1,709	25,605	4,178
1972	5,870	1,262	2,260	226	8,130	1,488
1973	32,460	3,252	10,170	1,525	42,630	4,777
1974	7,605	1,094	-	-	7,605	1,094

* Figures also including Kemp's ridley turtles sold as loggerheads. No landings after 1974.

Sources: (1) Rebel (1974).
 (2) Florida Dept. of Natural Resources,
Summary of Florida Commercial Marine Landings,
 1972-74.

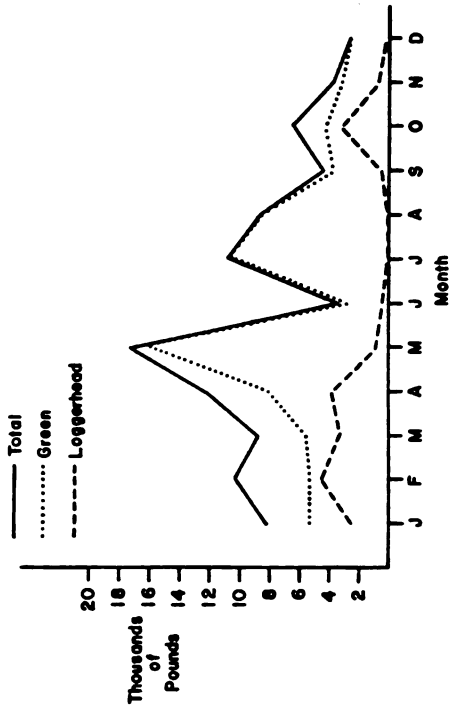


FIGURE 8. AVERAGE MONTHLY LANDINGS OF GREEN AND
LOGGERHEAD TURTLES IN FLORIDA, 1972-74.

Table 13. Production of sea turtles in Florida by type of gear, 1962-1974.

Year	Haul Seine		East Coast Longline		Otter Trawl		Gill Net	
	Green	Loggerhead	Green	Loggerhead	Green	Loggerhead	Green	Loggerhead
1962	800	1,500						
1963								
1964								
1965								
1966								
1967								
1968								
1969								
1970								
1971								
1972								
1973								
1974								

-----Pounds-----
 800 1,500 500

200 3,900 1,200 1,800
 200 800 100 100
 4,100 3,300 4,300 500
 9,400 5,200 400
 4,100 5,900 2,300
 2,900 32,500
 9,200 7,600

Table 13. Production of sea turtles in Florida by type of gear, 1962-1974 (extended)

Year	West Coast					
	Otter Trawl		Gill Net		Handline	
	Green	Loggerhead	Green	Loggerhead	Green	Loggerhead
1962	1,000	3,200	25,700	3,400		
1963			51,500	8,100		
1964			29,600	1,100		
1965		1,100	24,900	100		
1966	400		28,100	100		
1967	2,000		149,700			
1968	100		62,700	1,900		
1969		700	12,100			
1970			410,500	22,200		
1971		1,500	120,600	13,200		1,200
1972			128,100	2,300		
1973			31,400	10,200		
1974			17,500			

Table 13. Production of sea turtles in Florida by ... of gear, 1962-74 (extended)

Year	TOTAL							
	Haul Seine		Longline		Otter Trawl		Gill Net	
	Total of total	Percent of total	Total of total	Percent of total	Total of total	Percent of total	Total of total	Percent of total
-----Pounds-----								
1962	2,300	6.3	500	1.4	4,200	11.6	29,100	80.6
1963							59,600	100.0
1964							30,700	100.0
1965					1,100	4.0	26,200	86.0
1966					8,000	21.1	30,000	78.9
1967					2,200	1.5	149,700	98.5
1968					900	1.4	64,700	98.6
1969					700	5.4	12,200	94.6
1970					7,400	1.7	437,500	98.3
1971					10,900	7.2	139,400	92.0
1972							1,200	0.8
1973					10,000	7.0	132,700	93.0
1974					35,400	46.0	41,600	54.0
					16,800	49.0	17,500	51.0

Source: U.S. National Marine Fisheries Service, Fishery Statistics of the U.S., 1962-1974.

Honorable Jim Wright
Speaker of the House of
Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

Enclosed are six copies of a draft bill --

"To amend the Endangered Species Act of 1973, as amended, to reauthorize appropriations for carrying out the Act during fiscal years 1988, 1989, 1990 and 1991, and for other purposes,"

together with a statement of purpose and need.

We have been advised by the Office of Management and Budget that there is no objection to the submission of this legislative proposal to the Congress, and that its enactment would be in accord with the program of the President.

Sincerely,

A handwritten signature in dark ink, appearing to read "Malcolm Baldrige". The signature is fluid and cursive, with the first name "Malcolm" written in a larger, more prominent script than the last name "Baldrige".

Secretary of Commerce

Enclosures

A BILL

To amend the Endangered Species Act of 1973, as amended, to reauthorize appropriations for carrying out the Act during fiscal years 1988, 1989, 1990 and 1991, and for other purposes.

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled, That section 15(a) of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1542(a)) is amended --

(a) by striking out paragraph (1) and inserting in lieu thereof the following:

"(1) not to exceed \$23,670,000 for fiscal year 1988, and such sums as may be necessary for each of fiscal years 1989, 1990 and 1991, to enable the Department of the Interior to carry out such functions and responsibilities as it may have been given under this Act;"

(b) by striking out paragraph (2) and inserting in lieu thereof the following:

"(2) not to exceed \$2,275,000 for fiscal year 1988, and such sums as may be necessary for each of fiscal years 1989, 1990 and 1991, to enable the Department of Commerce to carry out such functions and responsibilities as it may have been given under this Act; and"

(c) by striking out paragraph (3) and inserting in lieu thereof

the following:

"(3) not to exceed \$1,632,000 for fiscal year 1988, and such sums as may be necessary for each of fiscal years 1989, 1990 and 1991, to enable the Department of Agriculture to carry out its functions and responsibilities with respect to the enforcement of this Act and the Convention which pertain to the importation or exportation of plants."

Sec. 2. Section 15(c) (16 U.S.C. § 1542(c)) is amended to read as follows:

"(c) There are authorized to be appropriated to the Secretary to assist him and the Endangered Species Committee in carrying out their functions under section 7(e), (g), and (h) of this Act such sums as may be necessary for fiscal years 1988, 1989, 1990 and 1991."

Sec. 3. Section 15(d) (16 U.S.C. § 1542(d)) is amended to read as follows:

"(d) There are authorized to be appropriated to the Department of the Interior for purposes of carrying out section 8A(e) of this Act not to exceed \$390,000 for fiscal year 1988, and such sums as may be necessary for fiscal years 1989, 1990 and 1991, and such sums shall remain available until expended."

Sec. 4. Section 10(a)(1)(B) (16 U.S.C. § 1539(a)(1)(B)) is amended to read as follows:

"(B) any taking otherwise prohibited by sections 9(a)(1)(B) or 9(a)(1)(C) of this Act if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity."

STATEMENT OF PURPOSE AND NEED

The Endangered Species Act of 1973, as amended (ESA) (16 U.S.C. §§ 1531-1543) provides for the conservation, management and recovery of endangered and threatened species of fish, wildlife and plants. The ESA provides for the listing of endangered or threatened species of flora and fauna, prohibits certain activities involving such species, and establishes enforcement measures. Under the ESA, the Department of Commerce has jurisdiction over most marine species, including most marine mammals, and all marine fishes and sea turtles (except when on land). The Department of the Interior has jurisdiction over terrestrial and freshwater animals and plants, a few marine mammals, all amphibians, all avian species, and sea turtles when on land. The U.S. Department of Agriculture (USDA), through the Animal and Plant Health Inspection Service (APHIS), examines shipments of plants that are imported into or exported from the United States to ensure that they comply with the Convention on International Trade in Endangered Species and the ESA.

The purposes of this draft bill are to reauthorize appropriations to carry out the ESA for fiscal years 1988 through 1991; and to make a technical amendment to correct an oversight in the 1982 amendments to the ESA.

Section 15(a)(1) of the ESA authorizes appropriations for the functions and responsibilities of the Department of the Interior

under the Act. The authorization expired on September 30, 1985, but funding was continued under Pub. L. No. 99-591, making continuing appropriations for fiscal year 1987. This draft bill would reauthorize section 15(a)(1) at a level of \$23,670,000 for fiscal year 1988, and such sums as may be necessary for fiscal years 1989 through 1991.

Section 15(a)(2) authorizes appropriations for the functions and responsibilities of the Department of Commerce under the ESA. The authorization expired on September 30, 1985, but funding was continued under the Department of Commerce appropriations acts for fiscal year 1986 (Pub. L. No. 99-180) and fiscal year 1987 (Pub. L. No. 99-591). This draft bill would reauthorize section 15(a)(2) at a level of \$2,275,000 for fiscal year 1988 and such sums as may be necessary for fiscal years 1989 through 1991.

Section 15(a)(3) authorizes appropriations for the functions and responsibilities of USDA under the ESA. The authorization expired at the end of fiscal year 1985, but funding was continued under other authorities. This draft bill would reauthorize section 15(a)(3) at a level of \$1,632,000 for fiscal year 1988 and such sums as may be necessary for fiscal years 1989 through 1991.

Section 15(c) of the ESA authorized \$600,000 annually during fiscal years 1983 through 1985 for the Endangered Species

Committee to review requests for exemptions. Funds for this purpose, however, have not been requested or appropriated since the Department of the Interior received no exemption requests during that time. We view the lack of requests for exemptions as evidence that the interagency cooperation process is working well. Although no exemption funds are requested for fiscal year 1988, we believe it is important to reauthorize this activity to ensure that the exemption process remains available, if needed. Accordingly, this bill would reauthorize such sums as may be necessary for this purpose under section 15(c). Specific funding may be requested in the future, depending on whether or not any exemption requests are anticipated.

Section 15(d) of the ESA authorizes appropriations for activities under the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere. This draft bill would reauthorize section 15(d) at a level of \$390,000 for fiscal year 1988 and such sums as may be necessary for fiscal years 1989 through 1991.

This draft bill also would amend the ESA to correct an apparent oversight in the 1982 amendments to the Act. The 1982 amendments to the ESA added a provision to section 10(a) (16 U.S.C. § 1539(a)) that authorizes the Secretary of Commerce and the Secretary of the Interior to issue permits for takings of endangered species otherwise prohibited by section 9(a)(1)(B) (16 U.S.C. § 1538(a)(1)(B)) if such takings are incidental to,

(16 U.S.C. § 1538(a)(1)(B)) if such takings are incidental to, and not the purpose of, otherwise lawful activities. Section 9(a)(1)(B) prohibits takings of endangered species within the United States or its territorial sea. This draft bill would allow permits also to be issued for incidental takings otherwise prohibited by section 9(a)(1)(C) (16 U.S.C. § 1538(a)(1)(C)), which prohibits takings on the high seas by persons subject to the jurisdiction of the United States.

The proposed amendment would enable NOAA to collect data on takings on the high seas which, under the current permitting system, go unreported. NOAA is considering whether to issue permits for takings of endangered sea turtles incidental to certain Gulf of Mexico fishing operations. Under the current statute, a permit is limited to activities within the three-mile territorial sea. Much of the shrimping and other fishing activity, however, occurs outside this area. If a permit could be issued to cover takings on the high seas, NOAA could gather valuable data regarding the distribution and population size of the endangered Kemp's ridley turtle. We do not believe this authority will result in an increased number of takings.

In addition, this authority may enhance our efforts to protect those endangered species which are subject to entanglement. The proposed amendment would authorize permits to be issued for incidental taking of endangered species in fishing gear; however, as a protective measure, a conservation plan to minimize and mitigate the impacts of these takings would have to be implemented in accordance with section 10(a)(2) of the ESA.



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20250

JUL 06 1987

Honorable Gerry E. Studds
House of Representatives
Washington, DC 20515

JUNE 30 1987

Dear Congressman Studds:

Thank you for your letter of March 31, 1987, on behalf of the Subcommittee on Fisheries and Wildlife concerning the recent hearing on the reauthorization of the Endangered Species Act (ESA). We regret the delay in responding to your letter.

We are pleased to answer your questions.

1. According to an agreement between our Animal and Plant Health Inspection Service (APHIS) and the Law Enforcement Division (LED) of the U.S. Fish and Wildlife Service (FWS), the law enforcement agents of the FWS investigated all mutually agreed upon alleged violations of the plant import and export provisions of the ESA. When the agreement expired, the FWS chose not to continue participation. However, the Chief of the LED has maintained informal contact with APHIS headquarters personnel, and the two Agencies frequently exchange information of mutual interest.

We have received no communication from the U.S. Department of Justice about renewal of the agreement. Regardless, we could not renew the agreement unilaterally, and at this point we have no indication that the FWS favors renewal.

2. In some situations, we agree that enforcement could be improved by sharing the responsibility for investigating alleged violations with the FWS. However, we believe that sharing enforcement responsibilities at the ports of entry could also result in weakened enforcement because of a confusion of roles between the Agencies. The Departments of Agriculture (USDA) and the Interior could cooperatively investigate alleged violations after the product had cleared the port of entry. We believe this approach would eliminate confusion of Agency roles while providing investigative law enforcement capability at minimal expense.

3. Although we are uncertain what cases the Natural Resources Defense Council (NRDC) is referring to, APHIS has the authority to seize plants that do not comply with the law. Before seizing imported plants, however, we must establish that they have been taken from the wild, even though certified to be

Honorable Gerry E. Studds

2

artificially propagated. This can be very difficult to establish. We have a trained force of botanists who handle these shipments regularly and are alert to potential problems. We have also sought the opinions of other experts on some occasions. However, no technology is available to conclusively prove that a plant has been wild-dug. On occasion, we hold suspicious shipments for 1 to 2 days and ask the U.S. Management Authority at the FWS to cable the foreign management authority that issued the document to verify the validity of the artificial propagation statement. Lacking substantive proof, we believe this should be the extent of our actions. Nevertheless, the management authorities throughout the world and the Secretariat established by the Convention on International Trade in Endangered Species (CITES) can bring pressure on the issuing country by questioning or reverifying the validity of certificates of artificial propagation.

4. APHIS personnel have no substantive information to indicate whether shippers or importers are falsely claiming that plants have been propagated. However, in most situations, importers are completely dependent upon the information received from their suppliers and have no practical way to verify the information. Because importers must depend on their suppliers for this information, APHIS personnel do not believe requiring importers to declare whether plants are propagated or wild-dug would aid enforcement. We cannot feasibly expect U.S. importers of small numbers of plants regulated under CITES to travel great distances to verify that the plants are being artificially propagated.

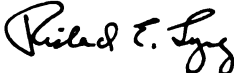
5. We are not certain why the NRDC believes APHIS has tried to prosecute three alleged violations since CITES came into force. APHIS attempted to prosecute criminally one alleged violator in 1978. We lost the case, and the plants were returned to the importer. Since that time, APHIS has cooperated with the FWS in prosecuting several cases including two involving cacti, two involving ginseng, and one involving ladyslipper. In addition, we investigate numerous alleged violations each year, many of which are unfounded and do not result in criminal prosecution. As we indicated in our testimony, most plant violations of CITES arise from ignorance of the law, and forfeiture of the plants is usually a sufficient penalty.

APHIS does not have a trained investigative law enforcement staff similar to the LED of the FWS. To train such a staff would take several years and be very expensive. However, the Office of the Inspector General (OIG) of USDA is available to investigate violations of the ESA and regulations thereunder, and APHIS has referred such alleged violations to OIG for investigation. As previously stated, we believe that cooperative investigative enforcement after the product had cleared the port of entry would improve CITES enforcement.

In regard to your concerns about use of Forest Service lands for the recovery of the grizzly bear and the Rocky Mountain wolf, habitat for these animals is being managed in conjunction with the Species Recovery Plans. The Forest Service forest planning process has ensured protection and enhancement through the consultation process described in Section 7E of the ESA and by identifying mitigation constraints necessary to balance our other multiple-use objectives.

We hope this information is helpful.

Sincerely,



RICHARD E. LYNE
Secretary

Questions submitted for the record by Mr. Studds - APHIS

1. During 1984 and 1985, APHIS and the Fish and Wildlife Service had a Memorandum of Understanding under which the Fish and Wildlife Service investigated violations of the plant import and export provisions of the Endangered Species Act.

-Why was this agreement discontinued?

-In prepared testimony, Mr. Bean of the Environmental Defense Fund noted that the Justice Department has urged that this agreement be renewed. Is that accurate, and if so, why has it not been renewed?

2. The Natural Resources Defense Council (NRDC) has suggested that the enforcement of the plant import and export provisions of the Act could be improved if the responsibility were shared by the Department of Agriculture and the Department of Interior. Specifically NRDC proposed that Section 3(14) of the Endangered Species Act be amended to read as follows:

The term "Secretary" means, . . .; except that with respect to the enforcement of the provisions of this Act and the Convention which pertain to the importation or exportation of terrestrial plants; the term also means the Secretary of Agriculture."

3. The Natural Resources Defense Council (NRDC) has informed the Committee that APHIS employees have allowed certain shipments of plants to enter the country despite their suspicions that the documents had been altered. The NRDC added that, in other cases, acknowledged experts have unanimously stated that plants of a certain kind from certain countries are wild-dug and being traded under improper artificial propagation certificates, but that APHIS has not acted to hold the shipments for inspection by experts and possible imposition of penalties. Is this information accurate? Can you tell the Committee what level of proof you believe is necessary before APHIS may hold a shipment of plants for further investigation?

4. The NRDC has informed the Committee that it appears that other CITES countries are not yet as careful in issuing permits for the plant trade as they should be. The NRDC adds that some American dealers appear to be taking advantage of this by regularly importing large quantities of wild-dug succulent plants mislabeled as propagated, and that these dealers apparently know that the plants that they are importing are wild. Is this information accurate? If so, should APHIS consider amending its regulations to require the importer to declare whether his plants are propagated or wild-dug?

5. The NRDC has informed the Subcommittee that since the Convention on International Trade in Endangered Species (CITES) came into force a decade ago, APHIS has attempted to prosecute only three alleged violators under the treaty's plant trade provision. The NRDC also notes that APHIS has not trained criminal investigators to carry out its responsibilities under CITES and the Endangered Species Act. Is this information accurate, and if so what does APHIS plan to do to improve its implementation of the Endangered Species Act?

↓ Forest Service

1. At the hearing Mr. Marlenee, a U.S. Representative from Montana and Mr. Craig, a U.S. Representative from Idaho, raised several concerns over efforts being made pursuant to the Endangered Species Act for the recovery of the Rocky Mountain wolf and the Grizzly Bear. Some of the concerns raised were related to constraints on the use of Forest Service lands resulting from recovery efforts for these 2 species. Would you care to respond to any of the points raised?



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
 WASHINGTON, DC 20310-0103

MAY 15 1987

11 MAY 1987

Honorable Gerry E. Studds
 Chairman, Subcommittee on Fisheries and
 Wildlife Conservation and the Environment
 Committee on Merchant Marine and Fisheries
 House of Representatives
 Washington, D. C. 20515-6230

Dear Mr. Chairman:

Thank you for your letter of April 2, 1987, to the Honorable Robert K. Dawson, Assistant Secretary of the Army, concerning actions taken by the Army Corps of Engineers to assist in the implementation of Endangered Species Act. On May 4, 1987, Secretary Dawson assumed the post of Associate Director for Natural Resources, Energy and Science, Office of Management and Budget. The Secretary of the Army appointed me as Acting Assistant Secretary of the Army (Civil Works) effective May 4, 1987.

To facilitate the inclusion of our responses to your questions in the record of the March 17 hearing on the reauthorization of the Act, I have enclosed a question/response sheet for your Subcommittee's use.

I appreciate this opportunity to provide our responses for the record.

Sincerely,

John S. Doyle, Jr.
 Acting Assistant Secretary of the Army
 (Civil Works)

Enclosure

Subcommittee on Fisheries and Wildlife
Conservation and the Environment
Hearing on March 17, 1987

Department of the Army Responses to
Questions Relating to Reauthorization
of the Endangered Species Act

Question (1)

"Section 7(a)(1) of the Act directs all federal agencies to 'utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of' the species it protects. The Subcommittee is interested in how the U. S. Army Corps of Engineers (the Corps) has implemented this directive and, specifically, what programs it is carrying out for the conservation of protected species. Also please provide to us Detailed information concerning the manner in which the Corps has communicated this legislative directive to its District and Division Engineers."

Response (1)

Corps regulations and guidance (ER 1105-2-50, Chapter 2 and ER 1130-2-400) direct Corps division and district engineers to utilize the best management techniques available, and all Corps programs are coordinated with appropriate Federal and state resource agencies. Corps project lands are managed for the protection and conservation of the natural resources specific to each project area. Whenever listed endangered or threatened species or designated critical habitats are found on Corps lands, the detailed management program is coordinated with the Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), and the appropriate state resource agency. In some instances, the Corps has implemented the Section 7 consultation process to develop specific management programs for the various species of plants and animals protected by the Act. Also, many Corps actions, such as dredging, construction, placement of dredged material, beach nourishment, etc., are carried out during specific "time windows" to avoid impacts on both protected and nonprotected animal species during migration, nesting, and rearing seasons.

Question (2)(a)

"What, if any, policies has the Corps adopted with respect to activities it authorizes or carries out that affect candidate species?"

Response (2)(a)

Enc. 1.

As mentioned in the above response, the Corps management programs at each project are designed to protect and conserve the natural resources (plants and animals) in the area, and all management programs are coordinated with Federal and state resource agencies. The Corps has no additional guidelines regarding specific actions to be taken for those species of plants and animals categorized as "candidate species," because the Endangered Species Act does not require any specific coordination or consultation for candidate species.

Question (2) (b)

"How, if at all, does the Corps ensure that its District and Division Engineers are kept apprised of the lists of candidate species and of their potential presence on lands or waters under Corps jurisdiction or subject to Corps regulatory programs?"

Responses (2) (b)

Corps Project Lands:

To determine if any of the approximately 3850 candidate species (over 2500 plants and over 1350 animals) are located on Corps lands, resource inventories have been compiled for all planned Corps projects that require environmental impact statements and for completed projects that are managed by the Corps.

Corps Permit Program:

When an application for a Corps permit is received, a preliminary review of potential endangered species impacts is performed before a public notice is issued. During the public notice comment period, the FWS and NMFS are provided opportunities to comment, as appropriate, on candidate as well as on endangered, threatened, and proposed species.

Section 7 Consultations:

During Section 7 consultations associated with Corps project lands or permit cases, the FWS and the NMFS have an additional opportunity to provide information on candidate species in addition to the information and recommendations these agencies provide on species or critical habitats that have been designated for higher level consideration.

Question (2) (c)

"The vast majority of wetland filling activities subject to Corps regulatory authority under Section 404 of the Clean Water Act are authorized by means of 'nationwide general permits' pursuant to which each activity is not individually scrutinized by the Corps prior to its occurrence. Under the

Corps' regulations (33 C.F.R. 330.5(b)), however, a general permit is not valid for any activity that 'jeopardize(s) a threatened or endangered species as identified under the Endangered Species Act.' The Subcommittee received testimony in 1985 that one of the few populations of the spreading globeflower, then a candidate species, had been destroyed in New Jersey as a result of a filling activity that had been authorized by a Corps' general permit. What steps, if any has the Corps since taken to ensure that similar losses of candidate species do not occur? How does the Corps know whether the activities authorized by its general permits may affect listed or candidate species?"

Response (2) (c)

Although the Corps regulations and nationwide permits do not address candidate species, we believe that the minor nature of the activities covered by these permits reduces the likelihood that such species would be adversely affected. The case cited is very unusual, and the FWS has decided that the spreading globeflower should not be considered a threatened or endangered species. Furthermore, we do not believe that specific steps should be taken to ensure that losses to candidate species do not occur because such actions are neither required by Federal statute nor the FWS endangered species regulations. The nationwide permits do not authorize any activities that jeopardize a listed species. In our November 13, 1986, regulations, we modified the nationwide permits to require notification and Section 7 consultation if the activity may adversely affect a listed species. There are no restrictions or provisions on the nationwide permits relating to candidate species.

Question (3)

"During the 99th Congress, this Subcommittee recommended, and the full House agreed, that the Endangered Species Act be amended to require the monitoring of candidate species to ensure that they do not decline further or disappear before they can be listed under the Act. How can the Corps assist in this monitoring effort for candidate species that occur on lands or waters under Corps' jurisdiction or subject to Corps' regulatory programs? Would the assistance of the Corps in this effort require additional resources and, if so, to what extent?"

Responses (3)

Corps Project Lands:

The existing broad general management programs for the resources on project lands provide an existing framework to which monitoring programs for specific species of plants and animals could be added. For the Corps to initiate a realistic and valid monitoring program for the candidate species on its lands, additional personnel, with technical expertise to either conduct the

monitoring or to manage non-Corps contractors, and additional funds would be required. The amount of the funds and additional personnel necessary for monitoring candidate species on Corps lands would depend on the scope and extent of the monitoring program and upon the specific species groups to be monitored. Monitoring of aquatic species (fish, mussel, etc.) would be the most difficult and expensive, while the monitoring of terrestrial wildlife would differ from the monitoring of terrestrial plants in time and cost.

Corps Permit Program:

The monitoring of candidate species in waters subject to Corps regulatory authorities poses a different problem. Unlike Corps project lands, there is not a known number of large sites for which ongoing monitoring programs can be developed. Site inspections associated with permit reviews could include determinations as to whether candidate species are present. However, this would increase the time and resources required for these inspections and would require additional specialized training for the Corps personnel involved. Since the Corps coordinates all permit applications with the FWS pursuant to the Fish and Wildlife Coordination Act, an increase in Corps capabilities in this area would only serve to duplicate the expertise already available in the FWS.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

MAY 29 1987

Honorable Gerry E. Studds
Chairman, Subcommittee on Fisheries and
Wildlife Conservation and the Environment
Committee on Merchant Marine and Fisheries
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your letter of March 31, 1987, in which you enclosed additional questions of the Subcommittee following my testimony of March 17, 1987, on the reauthorization of the Endangered Species Act. The answers to the questions are enclosed.

We are pleased to be able to respond to your questions, and look forward to working with you and the other Members of the Subcommittee in the future.

Sincerely,

William E. Evans
Assistant Administrator
for Fisheries

Enclosure



Questions submitted for the record by Mr. StuddsGeneral

1. The Fish and Wildlife Service has identified 3800 species as possible candidates for listing under the Endangered Species Act.

Has NMFS established a similar list for marine species?

If not, what steps does NMFS take to identify those marine species that may be endangered?

Has NMFS consulted with the Fish and Wildlife Service on the procedures used to identify candidate species, and if so, would the Fish and Wildlife Service procedures be appropriate for NMFS?

As directed by the Act, the Smithsonian Institution identified 3000 plant species as possible candidates for listing. Should an outside organization create a similar list for marine species?

If so, what organization do you think would be appropriate?

Answer: The National Marine Fisheries Service (NMFS) does not have a list of marine species that are candidates for listing under the Endangered Species Act.

However, the NMFS is developing a mechanism to identify and review the status of species that may warrant listing under the Act. We are aware of the procedures used by the Fish and Wildlife Service and will consult with them on this matter.

We have relied on information provided to us by the public, research scientists, conservation organizations and other Federal agencies to identify marine species that may require the protection of the Act.

I believe that NMFS should solicit this information from a variety of sources, including universities, professional scientific societies, research scientists and museums.

2. What specific actions have you taken, or are you planning to take, to develop a recovery plan for the right whale? What funding level is dedicated to the conservation of the right whale in fiscal year 1987?

Answer: The NMFS is developing a National Recovery Plan for the right whale. In the near future I will appoint a Recovery Team to advise and assist me in this recovery effort. In FY 87, \$250,000 is dedicated to the conservation of the right whale.

3. Have you determined which of your listed species are most critically endangered, and in most serious need for recovery actions? If so, which species are most endangered? If not, why not?

Answer: Based on the results of the five-year status reviews, we believe that the most critically endangered species are the following: the monk seals; Kemp's ridley sea turtle; the right whale; the East Greenland-Spitsbergen bowhead whale, and the western North Pacific gray whale.

We have developed and are implementing recovery plans for the Kemp's ridley sea turtle and the Hawaiian monk seal. The Caribbean monk seal may be extinct. The Mediterranean monk seal, the East Greenland-Spitsbergen bowhead and the western North Pacific gray whale do not occur in U.S. waters. We are developing a recovery plan for the right whale.

4. Has NMFS established a systematic procedure for the use of recovery teams? If not, do you plan to establish such a procedure?

Answer: The NMFS does not have a systematic procedure for the use of recovery teams. Because we are focusing more of our resources on recovery efforts, we believe that such a procedure would be beneficial. Therefore agency personnel will be developing such a procedure.

5. Under the Act, you are required to develop and implement recovery plans for endangered and threatened species that fall under your jurisdiction. I understand that a good deal of research is necessary before any management recommendations can be made and implemented for a given species. To what extent have you moved beyond the research stage in your effort to develop recovery plans?

Answer: Management recommendations will be included in all recovery plans being developed. NMFS is implementing a number of recovery actions under existing recovery plans. For sea turtles, we have proposed regulations that would require certain shrimp trawlers to use turtle excluder devices in specific areas of the South Atlantic Ocean and Gulf of Mexico. Also, rogue male Hawaiian monk seals have been relocated and in some cases removed from the wild for physiological studies to determine the cause of their aggressiveness. Although research needs have not been met fully, we do have enough information to proceed with recovery actions for many of the listed species under our jurisdiction.

6. The Fish and Wildlife Service has established agreements with 46 states for cooperative efforts in implementing the Endangered Species Act. I understand that NMFS has established one such agreement. Do you believe the states can fill a useful role in endangered species work on the species for which NMFS is responsible? If so, can you give any specific examples?

Answer: I believe that states can fulfill useful roles in marine endangered species programs. The NMFS will be exploring with coastal states their interest in developing cooperative management plans and programs for endangered and threatened marine species. Such cooperative programs can be particularly beneficial for species, such as sea turtles and shortnose sturgeon, that utilize coastal areas.

7. How much money does NMFS have available for its endangered species program this year?

Answer: A total of \$3.3 million is dedicated to endangered species programs, \$983,000 for management, \$2,131,000 for research activities and \$214,000 for enforcement.

TEDs

8. In written testimony Mrs. Grunert states that "It has been noted by both NMFS and the shrimp industry that the highest incidence of turtle mortality coincides with the lowest point of fishing effort in the Gulf of Mexico." How do you reconcile that statement with the correlation drawn between shrimp fishing and turtle mortality? (See attached table)

Answer: Based on data gathered by the Sea Turtle Stranding and Salvage Network (STSSN) which monitors sea turtle strandings, there is a correlation between the level of strandings and major shrimping effort. These correlations have been documented by scientists and STSSN personnel for several locations including Louisiana and Texas. The data provided by Mrs. Grunert show only strandings for Texas, not the entire Gulf. In addition, those data suggest that there is a correlation between strandings and shrimping activity, particularly for the Kemp's ridley. The information from strandings is used to augment our incidental catch data gathered by observers on commercial shrimp vessels.

9. Could you please provide an estimate of how many law enforcement officers will be necessary, and at what cost, to adequately oversee the implementation of the proposed TED regulations? How many officers are there currently stationed in the Southeast and Gulf Regions? Did NMFS ask for any budgetary increases in FY 1988 for Enforcement and Surveillance operations to enforce these regulations?

Answer: It is estimated that four NMFS Special Agents would cost \$240,000 per year to oversee the implementation of the proposed regulation. Additional costs for special operations such as leasing shrimp boats for enforcement work bring the total annual cost for NMFS enforcement operations to \$275,000. The cost for establishing and maintaining a minimally effective program would be incurred by the Coast Guard. NMFS did not ask for any budgetary increases to enforce these regulations but plans to use existing enforcement resources. It is our hope that the various states will eventually assist in enforcement. There are presently 15 field agents in the Southeast and Gulf regions.

10. According to the proposed rules, if the Secretary of Commerce determines by July 15, 1990, that the use of TEDs in the Gulf of Mexico is less than 80%, then new regulations would be imposed on U.S. Gulf fishermen unless Mexican shrimp trawlers have achieved comparable use of TEDs. Would you please explain to the Subcommittee the meaning of the phrase "comparable use of TED by Mexican fishermen"? How large is the Mexican shrimp fleet in the Gulf, and how large is its shrimp catch relative to the U.S. catch? How serious is the incidental sea turtle catch in the Gulf of Mexico by Mexican shrimp trawlers? What actions, if any, has Mexico taken to require use of TEDs in its waters?

Answer: By comparable use we mean that about the same percent of Mexican shrimp fishing effort as U.S. shrimp fishing effort is with TED equipped nets. This is one of the provisions of the agreement on which the proposed regulations are based. About 450 Mexican trawlers fish for shrimp in the Gulf of Mexico; the number of U.S. trawlers is about 13,000. The latest figures show that Mexican trawlers caught 27,700 tons of shrimp in the Gulf of Mexico, which represents about one third of the U.S. catch. We have no data on the incidental catch and mortality of turtles associated with the Mexican shrimp fishery in the Gulf of Mexico.

Mexico has indicated that its shrimp trawlers will be required to use TEDs. The Mexican government has requested U.S. assistance in transferring this technology to its shrimp fishermen.

Questions submitted for the record by Mr. JonesEndangered Species

Question: It is my understanding that last year, your agency took a general scientific research permit for sea turtles issued to it by the Fish and Wildlife Service, and despite its specific prohibition against allowing lethal takes, your agency sub-permitted that permit out to certain oil companies in order to protect them from prosecution for killing sea turtles during the demolition of oil rigs in the Gulf of Mexico. Could you please explain how this could have happened? Was the Fish and Wildlife Service aware that you had reissued its permits?

Answer: The removal of offshore oil platforms using explosives has been identified as a possible source of sea turtle mortality. In order to monitor the effects, the NMFS sub-permitted certain oil companies as agents under the research permit issued by the FWS, although the activity was not specifically authorized by the permit. This was due to a misunderstanding by NMFS field personnel of what the permit authorized and how agents could be designated. We have since strengthened our permit monitoring so that such mistakes will not happen in the future. The Fish and Wildlife Service was not aware that we sub-permitted the oil companies as agents under the permit.

Questions for NMFS submitted for the record by Mr. Ortiz

1. You indicate in your draft supplement to the final environmental impact statement on listing and protecting of various sea turtles that there is a correlation between shrimp activity and turtle strandings. Yet, statistics that I have received from your agency on strandings in Texas indicate that the highest number of strandings take place in April, the month of lowest shrimping activity. Furthermore, there is no major increase in turtle strandings during the months of highest shrimping activity, July and August.

Could you please explain your statement?

Do you believe that shrimpers are the only cause of turtle strandings?

Have other activities taken place in the Gulf during April or November which could have an adverse impact on the sea turtle?

Answer: The months of greatest sea turtle strandings off Texas are April, May, July and August, with April accounting for nearly a quarter of the strandings. Scientists have demonstrated that there is a correlation between turtle strandings and shrimping activity. We believe that turtle strandings data augment data obtained by observers on shrimp boats. Stranding data are not the sole or principal basis of estimates of incidental catch and mortality of sea turtles.

There are several causes of turtle strandings, both natural and human-induced. We have not been able to determine the causes of most strandings.

Yes there are a number of activities, such as oil rig removals that have taken place during April or November that could have adverse impacts on sea turtles. However, we do not have data that indicate any specific activity has caused any increase in strandings.

SWRS data suggest that 49,973 sea turtles are caught annually by U.S. Shrimp Vessels operating in the South-eastern-U.S. and 11,179 die. How did you get your data estimates for caught and dead turtles? What is your confidence level regarding these estimates?

How many actual observer hours were spent off the coast of Texas?

How many turtle strandings and deaths were observed off the coast of Texas? Off the coast of Louisiana?

Do you have data on the impact of purse seiners on the sea turtle? Could you provide me with the detailed statistics?

How many turtles do you estimate die each year from all factors?

Answer: In answer to your first question, please refer to the letter dated March 20, 1987 from William Evans, Assistant Administrator for Fisheries, to the Honorable Gerry Studds. This letter was previously inserted for the record. The tables provided herein (Numbers 5 through 9) give estimates of mortality and the 95 percent confidence intervals for each species of sea turtles incidentally taken in shrimp trawls.

Observers aboard shrimp vessels spent 7,829 hours off Texas and 5,176 hours off Louisiana. During that time they observed the following:

	Texas		Louisiana	
	Total Captured	Dead	Total Captured	Dead
Loggerhead	7	4	16	7
Kemp's ridley	2	2	4	0
Green	1	0	0	0
Hawksbill	0	0	1	0
Leatherback	0	0	0	0

These captures are included in the CPUE data in Tables 5, 6, 7, 8, and 9.

From 1980 to 1986 a total of 1,117 sea turtles were found stranded off Texas and 143 off Louisiana. Prior to 1986, when 126 turtles were found stranded, the effort on the Louisiana coast was considerably less than off Texas. Thus, the totals are not comparable.

We do not have detailed statistics on the incidental catch of sea turtles in purse seines. However, the information that we do have indicates that this is not a significant source of turtle mortality. Other sources of mortality (including natural mortality) would be additive to fishing mortality and simply strengthen the case for controlling the mortality we know about.

We do not have an estimate of the number of turtles that die each year from all causes.

3. What do you believe is the principal cause of mortality to sea turtles?

Why is Shrimping never listed as a principal danger in your 5 year report on endangered species?

What has your agency done to address the other causes of death to the turtle besides shrimpers?

Answer: Based on available information the principal cause of nonnatural sea turtle mortality is drowning in shrimp trawls.

The 5-year status report discusses mortality of sea turtles in shrimp trawls a number of times (see pages 19, 45, 54 and 79).

We have consulted with other federal agencies on a number of activities that have impacts on sea turtles, including oil rig removals and dredging. During these consultations we have worked with the involved agencies to develop methods to reduce the impacts to sea turtles from these activities. We are considering a number of ways to address sea turtle mortality by all sources.

4. Is the sea turtle considered by conservationists to be endangered in countries other than the United States? What efforts, if any, has the U.S. made to work with other countries to protect the sea turtle?

Answer: Kemp's ridley, hawksbill and leatherback sea turtles are listed as endangered throughout their ranges. Breeding colonies of the green and olive ridley sea turtles also are listed as endangered. I believe that conservationists agree with these listings. The remaining populations of sea turtles are listed as threatened.

We have worked with a number of countries, including Mexico, Indonesia, Panama, Honduras, and Japan to transfer TED technology. We anticipate increasing our TED technology transfer efforts in Mexico in the near future. The NMFS also has participated in the MEXUS Gulf cooperative research agreement, contracted to produce a recovery plan for sea turtles in the Caribbean and played a major role in organizing and conducting the western Atlantic Sea Turtle Symposium (WATS).

The Convention on International Trade in Endangered Species (CITES) lists Kemp's ridley, hawksbill, leatherback, green and loggerhead turtles on Appendix 1.

5. The Mexican efforts to patrol the beaches in Rancho Nuevo should be commended. However, I understand that the entire nesting beach is not monitored during the entire nesting period. Do you believe that human and animal take in Mexico is still a problem for the sea turtle?

Do you believe that Mexican shrimping is a threat to the sea turtle?

Are you aware that Mexico has a turtle fishery? What is its impact on the sea turtle?

Answer: We believe that nesting Kemp's ridley sea turtles receive adequate protection from the Mexican Government. Human and animal take of eggs and nesting Kemp's ridley sea turtles is not a problem in Mexico. The major nesting area for this species is protected by the Mexican Government. There is only scattered nesting on other beaches and similar protection is not warranted for these few areas.

Yes, we believe that Mexican shrimping is a threat to sea turtles, particularly the Kemp's ridley. However, the waters off Rancho Nuevo are closed to trawling during the nesting season, and the Mexican Government will likely require its shrimp trawlers to use TEDs in the near future. In addition, waters off major nesting beaches in Mexico recently have been designated as wildlife reserves. We believe these actions will have a significant positive effect on sea turtle stocks.

Yes, we are aware that Mexico has a fishery for olive ridley sea turtles. The harvesting of turtles obviously has an impact on the population of the olive ridley sea turtle. However, we have no reliable data with which to quantify this impact.

5. Mr. Weber signed a letter earlier this year stating that if proposed regulations were not promulgated by mid-February, it would be too late for implementation in July. You did not issue the regulations until March 2nd. Also, some shrimpers have still not received copies of the regulations and many have not known about the public hearings. Don't you think in light of this information that the 1st phase-in of the regulations should be delayed until January 1988?

Answer: Copies of the proposed regulations, draft supplemental impact statement and the negotiated agreement, on which the proposed regulations are based, all were widely distributed. NMFS held 16 public hearings on the proposed regulations in the affected coastal states. We are now in the process of considering the thousands of comments received on the proposal. Based on the number of comments received, we believe that the shrimp industry and other interested parties were adequately informed of our proposed regulations. At this time there is no decision on a final regulation and thus no decision on starting dates.

6. I am concerned about the availability of TEDs for shrimpers and NMFS' position that whether sufficient TEDs are available or not, the regulations will go into effect in January 1988. First, how many TEDs do you anticipate will be needed by July 15th?

Do you really believe they will be available at a reasonable cost?

How many TEDs do you anticipate will be needed by January 1988?

How can you possibly require compliance with a regulation if the necessary equipment for compliance is not available?

Answer: Based on available information concerning the shrimp trawling industry, the National Marine Fisheries Service estimates on July 15, 1987, between 8,000 and 12,000 TEDs would be required under the proposed rule. This number would not change on January 1, 1988. We estimate that 37,000 TEDs would be required by 1990.

Yes, we believe that sufficient TEDs will be available at a reasonable price to implement any regulation that is published. This belief is based on information received from 18 potential manufacturers of TEDs.

7. Another major concern of mine is testing. I understand that you are testing for turtle exclusion, so you picked Cape Canaveral, Florida. However, conditions are not the same in the Gulf. We have trash problems that could possibly change the result. How many turtles have been caught in TEDs in the Gulf?

How many have been caught in standard nets during research exercises?

Of the turtles caught in TEDs in the Gulf, how many were dead?

Answer: The NMFS TED has been tested for shrimp retention throughout the Gulf and South Atlantic on offshore commercial shrimp grounds by commercial fisherman. During these tests no turtles were taken in TED equipped nets. We have no reason to believe that the TED will not be equally effective in inshore shrimp grounds. We have been working with a number of individuals and organizations to conduct the appropriate tests to confirm this belief.

During our research about 180 turtles were caught in standard nets.

No turtles were found dead in TED-equipped nets during our tests. We have a report from a shrimp that a turtle was caught by a bungee cord in a TED-equipped net.

8. I understand that the leatherback turtle may be too large for the TED and, because of its soft shell and ferocious temper,, may actually kill itself fighting in the TED. Do you have any comment?

Are we trading one endangered species for another?

Answer: Leatherback sea turtles account for less than 1 percent of the incidental mortality of sea turtles in shrimp trawls. The TEDs required to release large leatherbacks would be far too big to use aboard the majority of shrimp trawlers. We expect no increase in mortality of leatherbacks because of TEDs use.

We believe that the TED requirements of the proposed regulations will have significant conservation benefits for all species of sea turtles.

9. Have you ever tested the TEDs on 4 nets at a time on the large Gulf Trawlers? What were the results?

Do you have conclusive data to prove that 4 TEDs can be pulled safely and effectively at one time?

Answer: No, we have not conducted tests of the TED on four nets at a time. However, we have made 110 tows with two nets equipped with TEDs and two standard nets. The results of these tests indicated that there would be no problem towing four nets equipped with TEDs on trawlers capable of towing four nets.

10. The entire negotiation process concerns me. The regulations seem to me to be a "done deal." Are you going to pay any attention to public comments and the outcry in the Gulf States?

Is there any point in Gulf Shrimpers comments on the regulations?

Answer: Under Secretary Calio provided the environmental community and shrimp fishing industry with an opportunity to reach an agreement on how to prevent sea turtles from drowning in shrimp trawls. Dr. Calio provided this opportunity because both sides expressed an interest in solving the problem. NOAA sponsored the negotiations in good faith and found that the agreement reached was adequate to discharge our duties Under the Endangered Species Act. The proposed regulations are based on this agreement.

We are in the process of reviewing the thousands of comments received and will give each comment appropriate consideration. However, the decision on the final regulations must be based on the best available information and the requirements of the Endangered Species Act.

11. How much money are you recommending for education on the TED for shrimpers?

Are you educating the public in Spanish and in Vietnamese as well as English?

Answer: We are in the process of developing our educational program. At this time we are not able to determine what the costs will be.

We plan to develop turtle protection posters in all three languages.

12. Michael Weber is quoted in this morning's COPRUS CHRISTI CALLER saying that the alternative to TEDs is, and I quote, "the Fisheries will be closed." Do you agree with Mr. Weber's comment?

How many shrimpers have been charged with violating the Endangered Species Act in regard to the sea turtle?

Who has the authority to develop or implement a management plan to protect the sea turtle?

Does the plan have to require TEDs? Why or why not?

Answer: Our position in this issue is to provide adequate protection to sea turtles. We have not considered closing the fishery and do not believe that it is necessary to do so to protect sea turtles.

Our records show that there have been 28 cases involving sea turtles, 11 of these resulted in penalties for violations of the Act. Two of the cases are still open.

Both the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (FWS) have authority to develop a management plan for sea turtles under the Endangered Species Act. The two agencies have an agreement that places turtles in the marine environment under the jurisdiction of NMFS. NMFS has developed a recovery plan which contains a number of management actions to protect sea turtles.

There are no specific requirements for a turtle management or recovery plan to require TED or any other gear. However, we believe that the use of TEDs by shrimp trawlers will have significant benefits to sea turtle populations without having significant adverse effects on shrimp trawlers.

13. Many people have expressed concern about the safety aspects of the TED. Were those concerns considered in the proposal of the regulations?

How has NMFS addressed those concerns?

If a crewman on a shrimpboat was injured by working with a TED, could NMFS be held liable?

Answer: Most, if not all, those concerns were addressed during the development of the NMFS TED. In response to comments we modified the prototype several times and changed the device significantly. The original device weighed 90 pounds and the latest model weighs less than 40 pounds and is collapsible. There are four qualified devices under the proposed regulation. Our experience has shown that the devices are relatively easy and safe to use.

NMFS could not be held liable for any accidents or injuries involving TEDs. There are four devices to choose from and the owner or captain can elect to fish in an area in which a TED is not required.

14. Have you considered the potential increased insurance costs to shrimpers in determining the total economic impact of these regulations on the shrimp industry?

What do you estimate the cost of these regulations to be to the shrimp industry? How did you reach that estimate?

Answer: According to our assessment, requiring the use of TEDs on shrimp trawlers would not increase insurance costs. As stated earlier, TEDs are relatively easy and safe to use. We see no reason to expect an increase in the number of accidents or injuries if TEDs are used with the appropriate care.

We estimate the range of costs to the industry to be between \$4 million and \$8 million annually. This is based on the costs of TEDs and the loss of bycatch that is sold. These costs are discussed fully in the Regulatory Impact Review.

15. How many people will be effected by these regulations?

Answer: We estimate that about 30,000 people will be affected directly by these regulations.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

June 1, 1987

To : Gina DeFerrari

From: Jeanne Grasso

Attached are Tables #5 through 9, which answer Congressman Ortiz's question #2 as submitted for the record pursuant to the ESA hearing on March 17, 1987. They were inadvertently omitted from the package that was sent to you.

TRANSMITTAL FORM CD-62A (10-67)
 PRESCRIBED BY DAO 314-2

U.S. G.P.O. 1982-664-006/1077

Table 5. Observer effort, CPUE, shrimping effort, estimated captures and estimated mortality of loggerhead turtles by areas.

Area 1/ Atlantic	Observer Effort 2/ 9,943	CPUE + 95% c.i. on CPUE 0.0456 ± 0.0039	Shrimping Effort 704,376 6/	Estimated Captures 4/ 32,120±2747	Estimated Mortality 5/ 6,745±577
Gulf					
Eastern	2,589	0.0046 ± 0.0026	611,530 3/	2,813±1590	956±541
Central	6,353	0.0022 ± 0.0012	2,391,498 3/	5,261±2870	1,157±631
Western	7,829	0.0020 ± 0.0010	1,312,670 3/	2,625±1313	998±499
Overall	16,771	0.0025 ± 0.0008	4,315,698 3/	10,789±3453	3,129±1001

1. Atlantic area includes shrimp statistical zones 24-33.
Eastern area includes shrimp statistical zones 1-7.
Central area includes shrimp statistical zones 8-17.
Western area includes shrimp statistical zones 18-21.
2. Based on NMFS observer data standardized to 30.5-m trawl hours.
3. Using shrimp fishing effort for the offshore Gulf of Mexico standardized to 30.5-m headrope length net hours, Table 2.
4. Captures = (CPUE x shrimping effort) ± (95% c.i. on CPUE x shrimping effort).
5. Based on the mean minutes fished/tow in the area. See Figure 2.
Mortality = (mortality rate x captures)
+ (mortality rate x (95% c.i. of captures)).
6. Atlantic offshore shrimp trawling effort standardized to hours of 30.5-m headrope length trawls.

Table 6. Observer effort, CPUE, shrimp effort, estimated captures and estimated mortality of Kemp's ridley turtles by areas.

Area 1/ Atlantic	Observer Effort 2/ 9,943	CPUE \pm 95% c.i. on CPUE 0.0018 \pm 0.0008	Shrimping Effort 704,376 7/	Estimated Captures 4/ 1268 \pm 564	Estimated Mortality 5/ 266 \pm 119
Gulf					
Eastern	2,589	0	611,530 3/	245 \pm 245 6/	83 \pm 83
Central	6,353	0.0003 \pm 0.0004	2,391,498 3/	717 \pm 957	158 \pm 210
Western	7,829	0.0005 \pm 0.0005	1,312,670 3/	656 \pm 656	249 \pm 249
Overall	16,785	0.0004 \pm 0.0004	4,315,698 3/	1726 \pm 1726	501 \pm 501

1. Atlantic area includes shrimp statistical zones 24-33.
Eastern area includes shrimp statistical zones 1-7.
Central area includes shrimp statistical zones 8-17.
Western area includes shrimp statistical zones 18-21.
2. Based on NMFS observer data standardized to 30.5-m trawl hours.
3. Using shrimp fishing effort for the offshore Gulf of Mexico standardized to 30.5-m headrope length net hours, Table 2.
4. Captures = (CPUE x shrimping effort) \pm 95% c.i. on CPUE x shrimping effort).
5. Based on the mean minutes fished/tow for the area. See Figure 2.
Mortality = (mortality rate x captures)
 \pm (mortality rate x (95% c.i. of captures)).
6. Based on the Gulf CPUE.
7. Atlantic offshore shrimp trawling effort standardized to hours of 30.5-m headrope length trawls.

Table 7. Observer effort, CPUE, shrimp effort, estimated captures and estimated mortality of green turtles.

Area 1/ Atlantic	Observer Effort 2/ 9,943	CPUE \pm 95% c.i. on CPUE 0.0007 \pm 0.0003	Shrimping Effort 704,376 7/	Estimated Captures 4/ 493 \pm 211	Estimated Mortality 5/ 104 \pm 44
Gulf					
Eastern	2,589	0	611,530 3/	61 \pm 122 6/	21 \pm 41
Central	6,353	0.0003 \pm 0.0003	2,391,498 3/	717 \pm 717	158 \pm 158
Western	7,843	0	1,312,670 3/	131 \pm 262 6/	50 \pm 100
Overall	16,785	0.0001 \pm 0.0002	4,315,698 3/	432 \pm 863	125 \pm 250

1. Atlantic area includes shrimp statistical zones 24-33.
Eastern area includes shrimp statistical zones 1-7.
Central area includes shrimp statistical zones 8-17.
Western area includes shrimp statistical zones 18-21.
2. Based on NMFS observer data and standardized to 30.5-m trawl hours.
3. Using shrimp fishing effort for the offshore Gulf of Mexico standardized to 30.5-m headrope length net hours, Table 2.
4. Captures = (CPUE x shrimping effort) \pm 95% c.i. on CPUE x shrimping effort.
5. Based on the mean minutes fished/tow for the area. See Figure 2.
Mortality = (mortality rate x captures)
 \pm (mortality rate x (95% c.i. of captures)).
6. Based on the CPUE for the Gulf.
7. Atlantic offshore shrimp trawling effort standardized to hours of 30.5-m headrope length trawls.

Table 8. Observer effort, CPUE, shrimp effort, estimated captures and estimated mortality of hawksbill turtles.

Area 1/	Observer Effort 2/	CPUE \pm 95% c.i. on CPUE	Shrimping Effort	Estimated Captures 4/	Estimated Mortality 5/
Atlantic	9,943	0.0001 \pm 0.0002	704,376 7/	70 \pm 141	15 \pm 30
Gulf					
Eastern	2,589	0	611,530 3/	61 \pm 122 6/	21 \pm 41
Central	6,353	0	2,391,498 3/	239 \pm 478 6/	53 \pm 105
Western	7,843	0.0001 \pm 0.0002	1,312,670 3/	131 \pm 262	50 \pm 100
Overall	16,785	0.0001 \pm 0.0002	4,315,698 3/	432 \pm 863	125 \pm 250

1. Atlantic area includes shrimp statistical zones 24-33.
 Eastern area includes shrimp statistical zones 1-7.
 Central area includes shrimp statistical zones 8-17.
 Western area includes shrimp statistical zones 18-21.
2. Based on NMFS observer data and standardized to 30.5-m trawl hours.
3. Using shrimp fishing effort for the offshore Gulf of Mexico standardized to 30.5-m headrope length net hours, Table 2.
4. Captures = (CPUE x shrimping effort) \pm 95% c.i. on CPUE x shrimping effort).
5. Based on the mean minutes fished/tow in the area. See Figure 2.
 Mortality = (mortality rate x captures)
 \pm (mortality rate x (95% c.i. of captures)).
6. Based on the CPUE for the Gulf.
7. Atlantic offshore shrimp trawling effort standardized to hours of 30.5-m headrope length trawls.

Table 9. Observer effort, CPUE, shrimp effort, estimated captures and estimated mortality of leatherback turtles.

Area 1/ Atlantic	Observer Effort 2/ 9,943	CPUE +95% c.i. on CPUE 0.0003 +0.0004	Shrimping Effort 704,376 7/	Estimated Captures 4/ 211+282	Estimated Mortality 5/ 44+59
Gulf					
Eastern	2,589	0	611,530 3/	61+122 6/	21+41
Central	6,353	0.0002 +0.0004	2,391,498 3/	478+957	105+210
Western	7,829	0	1,312,670 3/	131+262 6/	50+100
Overall	16,785	0.0001 +0.0002	4,315,698 3/	432+863	125+250

1. Atlantic area includes shrimp statistical zones 24-33.
Eastern area includes shrimp statistical zones 1-7.
Central area includes shrimp statistical zones 8-17.
Western area includes shrimp statistical zones 18-21.
2. Based on NMFS observer data and standardized to 30.5-m trawl hours.
3. Using shrimp fishing effort for the offshore Gulf of Mexico standardized to 30.5-m headrope length net hours, Table 2.
4. Captures = (CPUE x shrimping effort) + 95% c.i. on CPUE x shrimping effort.
5. Based on the mean minutes fished/tow in the area. See Figure 2.
Mortality = $\frac{\text{(mortality rate} \times \text{captures)}}{\text{(mortality rate} \times \text{(95\% c.i. of captures))}}$.
6. Based on the CPUE for the Gulf.
7. Atlantic offshore shrimp trawling effort standardized to hours of 30.5-m headrope length trawls.



ADDRESS ONLY THE DIRECTOR,
FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

JUN 2 1987

In Reply Refer To:
FWS/OES/1902408

Honorable Gerry E. Studds
Chairman, Subcommittee on Fisheries and
Wildlife Conservation and the Environment
Committee on Merchant Marine and Fisheries
House of Representatives
Washington, D.C. 20515-6230

Dear Mr. Chairman:

Thank you for your March 31 letter concerning the hearing on reauthorization of the Endangered Species Act. Enclosed are the Service's responses to your questions. If I can be of any further assistance, please let me know.

Sincerely,


DIRECTOR

Enclosures

QUESTIONS SUBMITTED FOR THE RECORD BY MR. STODOL

Candidate Species

Question 1: Last year's proposed reauthorization bill included a provision to require the Fish and Wildlife Service to monitor candidate species and to use emergency listing authority to list those species when necessary. Do you believe this provision is necessary, and do you support its inclusion in this year's bill? What specific actions would you take to implement such a provision?

Answer: The Service considers that the existing requirement to list all species that qualify as endangered or threatened already mandates monitoring of candidate species. In addition, emergency listing provisions have been available since the Act was first passed (extended to plants in 1979) and have been employed on appropriate occasions to forestall imminent declines of candidate species.

Since 1984, when notices of review were instituted for all candidate species native to the United States, monitoring of candidates has increasingly been a central organizing theme of the Service's administration of the Endangered Species Act. The notices of review are powerful information-gathering tools that are widely disseminated among those likely to have knowledge of the status of candidate species and those able to suggest additional candidates for review. Other Federal agencies, as well as State and private organizations, often use our notices to guide their land management and protection activities, providing early protection for many candidate species. The U.S. Forest Service and the Bureau of Land Management, for instance, treat our candidates as sensitive species. The Service is also in close contact with organizations such as The Nature Conservancy and State Heritage Programs that gather current information on species. We have also included a provision in the new consultation regulations that calls on the Director to provide, in addition to the lists of endangered, threatened, and proposed species, a list of candidate species that may be present in a Federal agency's project area when species lists are requested under Section 7(c). (See 50 CFR Subchapter 402.12(d).) Because we already make a major effort to identify and assess the status of candidate species, we believe an amendment requiring the Service to monitor them is unnecessary. Further, the Service would have done nothing different with regard to candidate species if last year's House amendment had been enacted; we view ourselves as already in compliance.

Endangered Plants

Question 2: The House report (Report 99-124) on H.R. 1027, (legislation passed by the House of Representatives during the 99th Congress to reauthorize the Endangered Species Act) included the following language: "The Committee believes the Fish and Wildlife Service should examine alternatives for plant protection. Such alternatives could include a process for regular communication with public and private organizations concerning the status of listed plants; voluntary management agreements to provide advice and assistance to private landowners with listed plants; and a mechanism to assist State and local law enforcement agencies that have jurisdiction over the theft, destruction, or illicit trade of listed plants on private lands. The Service should also continue to implement direct approaches for protection of plants, including the acquisition of easements related to plants to provide a basis for their protection." Which of these specific actions, if any, has the Fish and Wildlife Service taken to improve protection for endangered plants?

Answer: The Service has undertaken efforts for the cooperative protection of listed plants in concert with landowners and State authorities. Examples include landowner agreements to protect habitat for the green pitcher plant and publication of a booklet for distribution to landowners who may own habitat of the small whorled pogonia. The Service also plans to assist the State of Maine in developing instructive materials for landowners in the range of the Furbish lousewort. The Service intends to pursue other cooperative management arrangements for listed plant species as opportunities arise.

Question 3: It has been suggested that the protection of endangered plants should be enhanced by making it a Federal offense to take an endangered plant from private property if that taking is done in violation of a State trespass law or is otherwise prohibited by State law. The aim of such a provision would be to aid landowners in their efforts to protect endangered species on their own property. What is your reaction to this proposal?

Answer. There are two differing elements of the proposed amendment: to "remove, cut, dig up, or damage or destroy" listed plants on private lands in violation of the laws of any State, or to do so in the course of trespass on private lands. The first element of the proposed amendment would potentially apply to landowners as well as others, while the second would apply only to persons engaged in illegal conduct under State trespass laws.

We believe it would be wise to more closely examine State laws before moving to make purely intra-state activities, particularly activities of landowners with respect to plants on their lands, subject to Federal criminal penalties. We would suggest the Committee fully examine the range of State protections for listed or rare plants, both to determine how well such laws are actually operating to protect plants, and to permit a policy judgment on the variations between the differing State protective systems. No other prohibition in the Act is subject to variations in State laws, and we believe the situation should be fully explored before any action is taken.

While the Service is aware of several instances of deliberate vandalism or collecting of listed plants on private lands, such as the vandalizing of the only known population of the Virginia round-leaf birch, most plant species are more seriously threatened by conversion of habitat or incompatible land management regimes than by collecting or vandalism. In addition, instances of vandalism are very difficult to verify. It is often difficult to distinguish damage caused by a human agency from that caused by browsing or grazing, and the total destruction of listed plants may be indistinguishable from natural mortality. Such actions may not be detectable unless the affected plant population is being monitored down to the level of individual plants. We accordingly believe the usefulness of the proposed amendment as a conservation tool would be quite limited, and would again reiterate our position that the Act should be reauthorized without substantive amendments.

In addition, we would note that the Lacey Act Amendments of 1981 provide a law enforcement tool against those who illegally take State-listed plants from State or private lands in violation of State laws designed to protect such plants from such activities, and who then engage in interstate commerce, transportation or receipt of such plants. The Endangered Species Act itself prohibits interstate commerce in Federally-listed plants. Since the majority of such illegal takings would appear to be for commercial purposes, we believe we have the necessary authority to act in such instances.

Gaps in our enforcement abilities appear to exist for listed plants in the areas of removal and reduction to possession from private lands while in the course of trespass, if the plants do not enter into interstate commerce, and the malicious destruction of listed plants on non-Federal lands. We do not believe these two factors warrant an amendment at this time, for the reasons listed above.

Question 4: In prepared testimony, Mr. Bean of the Environmental Defense Fund has proposed an amendment to the Endangered Species Act to prohibit the malicious destruction of endangered plants on Federal lands. He noted that there have been apparent examples of such destruction citing the apparent cutting of a number of Virginia round-leaf birch seedlings in Virginia. Do you believe such an amendment is necessary, and would you support it?

Answer: We believe existing law provides sufficient penalties for the "malicious destruction" of listed plants on Federal lands. As noted below, there are laws and regulations applying to virtually all Federal lands which prohibit such actions. We would further refer again to our response to the previous question, noting that verification of such vandalism is extremely difficult.

Should vandals be apprehended, the following penalties would be applicable:

NATIONAL FOREST LANDS: 36 CFR 261.9(c) prohibits "damaging any plant that is classified as a threatened, endangered, sensitive, rare, or unique species"; 16 U.S.C. 551 provides a penalty of up to six months in prison, or a fine of up to \$500, or both for any violation of the regulation. In addition, 18 U.S.C. 1853 provides a penalty of up to one year in prison, or a fine of up to \$1,000, or both, for anyone who "unlawfully cuts or wantonly destroys or injures" any tree on any lands of the United States purchased or reserved for public use, or upon any Indian lands.

PUBLIC LANDS (BLM): 43 CFR 4140.1(b)(3) prohibits "cutting, burning, spraying, destroying or removing vegetation" without authorization; 43 U.S.C. 1733 provides a penalty of up to one year in prison, or a fine of up to \$1,000, or both, for any violation of the regulation.

NATIONAL PARK LANDS: 36 CFR 2.1 prohibits, except where specifically permitted, "possessing, destroying, injuring, defacing, removing, digging or disturbing from its natural state ... (any) plants or the parts or products thereof"; 16 U.S.C. 3 provides a penalty of up to six months in prison, or a fine of up to \$500, or both, for any violation of the regulation.

NATIONAL WILDLIFE REFUGE SYSTEM LANDS: 50 CFR 27.51 prohibits (except where authorized) "disturbing, injuring, spearing, poisoning, destroying or collecting ... any plant"; 16 U.S.C. 668dd(e) provides a penalty of up to six months in prison, or a fine of up to \$500, or both, for any violation of the regulation.

We therefore believe we have the necessary authority to pursue "malicious damage or destruction" of listed plants on Federal lands, and that no such amendment is presently needed.

Finally, as a point of clarification, we would note that the Virginia round-leaf birch seedlings apparently damaged by vandals were located on privately owned lands, not Federal lands.

Listing

Question 5: In prepared testimony, Mr. Bean of the Environmental Defense Fund urges that the Service "embrace the modest goal of making final listing decisions on all of the current Category 1 candidate species by the end of this century." What additional resources would be required to meet this goal?

Answer: There are now approximately 900 Category 1 candidates for listing under the Act. To list 900 candidate species by the end of the century, the Service would have to average approximately 70 listings yearly for the next 13 years. This would come to about \$4.2 million annually at the present cost-per-species of listing, or about \$1 million above the 1988 listing budget request. We believe the Fiscal Year 1988 budget request is adequate for listing high priority species. Assignment to Category 1, however, does not necessarily indicate that a species has high priority for listing, but only that information concerning its status is relatively complete. There is a very good chance that many of the species that would be listed between now and the year 2000 would be expected to come from among species now recognized as Category 2 candidates, but that would be revealed through our ongoing survey work to ultimately rank higher than species now included in Category 1.

TEDs

Question 6: Material submitted for the record of the hearing by Mr. Weber of the Center for Environmental Education includes a recommendation from the Fish and Wildlife Service to the Gulf of Mexico Fishery Management Council on use of the Turtle Excluder Device (TED). To what extent has the Fish and Wildlife Service been involved in the controversy over the mandatory use of TEDs by the shrimp industry?

Answer: Responsibility for the conservation of sea turtles is shared with the National Marine Fisheries Service (NMFS), which has jurisdiction over turtles when they are at sea, while the Fish and Wildlife Service has responsibility when they are ashore on nesting beaches. Therefore, the regulations proposed in March 1987 to implement the use of TEDs by shrimpers were developed and proposed by NMFS. The Fish and Wildlife Service has been intensively involved in the recovery and enhancement of sea turtle populations under its jurisdiction and has encouraged and supported NMFS' actions in promulgating these regulations. The Service's direct involvement so far has been to provide comments on the proposed TED regulations.

Recovery

Question 7: In prepared testimony, Mr. Feierabend of the National Wildlife Federation notes that over half the funds spent by the Fish and Wildlife Service in 1987 on its endangered species recovery program were allocated to only nine species. He suggests that resources need to be allocated more evenly among all listed species. Do you agree?

Answer: There are over 450 listed species with recovery tasks that deserve some consideration, although the recovery tasks are not all the responsibility of the Federal government. To distribute available recovery resources as equitably as possible, the Service developed a priority system (published in 48 FR 43098-43105) to identify the highest priority recovery needs. This system uses a two-tiered approach based on both species and recovery task priorities. Species priorities are based on threat, recoverability, and taxonomy. Task priorities are based on the assessment of the recovery action as to its impact in preventing extinction or maintaining species numbers. Recovery actions identified in recovery plans are biologically assessed using this priority system to ensure that available funds are directed toward highest priority needs. This biological assessment allows the Service to make objective funding decisions. The California condor, black-footed ferret, and whooping crane are three highly visible, critically endangered species with high recovery costs to which the Service has committed major resources. In addition, the southern sea otter, grizzly bear, wolf, Puerto Rican parrot, and manatee are biologically lower priorities, but the high cost recovery actions for these species are also deemed important by the Congress, which has designated appropriated funds for these species in recent years. Although these previously mentioned species utilize a large portion of the Service's recovery resources, an additional 168 recovery projects involving 123 additional species have been funded. This reflects the Service's commitment, to the extent possible, to allocate recovery resources where they are most needed.

Question 8: In written testimony, Mr. Bean of the Environmental Defense Fund recommended that endangered species recovery plans should be fairly specific about:

- "1) what criteria, when met, will establish that the species has in fact recovered;
- 2) the time frame within which the recovery effort is to be carried out; and
- 3) the estimated costs to the appropriate Service of carrying out the measures for which it will be responsible under the recovery plan."

To what extent are these issues already addressed in recovery plans? To the extent that they are not, what advantages or disadvantages would be associated with their inclusion in recovery plans?

Answer: To the extent possible, all three issues raised by Mr. Bean are currently addressed in recovery plans.

1) Criteria are established in recovery plans to determine when a species is recovered. The recovery goal is stated (in quantitative terms when possible) in the recovery plan under the heading "Recovery Objective." For example, in the Eastern Cougar Recovery Plan, it states that "Recovery will have been satisfactorily accomplished when at least three self-sustaining populations have been found or established in the U.S. Each population will be considered self-sustaining if it contains a minimum of 50 breeding adults, and if losses of these adults are being replaced through reproduction and/or immigration from nearby populations." Likewise for the Small Whorled Pogonia Recovery Plan: "Locate and protect 30 populations (sites) of at least 20 individuals each throughout the range of the species. At least 15 of these sites should be located in the New England area." There are situations where not enough information is known about a species to establish quantitative recovery goals when a plan is written. In these circumstances, the Service policy is to establish a general goal, proceed with recovery actions, and subsequently develop more specific, quantitative goals as more information is accumulated about a species. The recovery objectives are based on our best current information. We review and revise our recovery plans periodically and adjust recovery goals based on new information that becomes available.

2) Again, as stated in item 1, enough information is not always available to identify a specific time frame for recovery to occur. However, in the Implementation Schedule (Part III) developed for each recovery plan, an attempt is made to identify those tasks that should be done first (priority 1) and an estimate is given on how long the task should take. The accuracy of this information will depend on how much is already known about the listed species before the recovery program is initiated. As tasks are carried out, time factors are modified to reflect new information.

3) The discussion on time in item 2 can also be applied to costs. Whenever possible, the Implementation Schedule will identify costs for recovery tasks. These costs are estimates, normally based on previous experience in doing similar work. However, costs change, unexpected expenses occur, and delays will obviously have an impact. Experience has shown that developing more accurate, long-range, cost estimates for recovery planning is not realistic.

It is the Service's position that recovery plans currently address priorities, goals, time, and costs to maximize effectiveness, and any additional effort in this regard would not result in any meaningful impact on species recovery efforts.

General

Question 9: In written testimony, Mr. Bean of the Environmental Defense Fund and Mr. Fitzgerald of the Defenders of Wildlife have suggested the establishment of a civil cause of action, similar to that created by Superfund, for recovery of damages for injuries to endangered species that result from violations of the Endangered Species Act. What is your reaction to this proposal?

Answer: We view this proposal as likely to be highly controversial, and in the interest of a prompt reauthorization of the Act, we strongly urge the Committee not to consider the issue at this time. There have been no hearings on the implications of the proposal and, to the best of our knowledge, no specific language advanced for consideration. We continue to believe that the purposes of the Act can best be served by a reauthorization with no significant changes to provide a period of time for the Service to administer a constant body of law. If, after several years of operating under a stable program, it appears that changes are needed, the matter could be addressed in detail during the next reauthorization period. Such a postponement of consideration would also provide both the Committee and the Administration an opportunity to evaluate the operation of the natural resource damage provisions of the Superfund and other environmental laws, providing a more solid basis for decision-making.

Question 10: In written testimony, Mr. Robertson of the International Association of Fish and Wildlife Agencies recommends that the Endangered Species Act be amended to "maintain the integrity of State programs and the Federal program with regard to Indian utilization of endangered species." Do you believe such an amendment is necessary and would you support it?

Answer: It is the Department's view that the prohibitions of the Endangered Species Act apply to everyone, including Indians. That is why the Department pursued prosecution in the Dion case. Although the Supreme Court did not rule in the Dion case as to whether Indian treaty hunting rights are abrogated by the Act, it did rule that such treaty rights are abrogated by the Eagle Protection Act. The Department of Justice, after consultation with the Department of Interior, has recently filed charges against Chairman Billie of the Seminole Tribe who allegedly took one of the remaining Florida panthers. Accordingly, this case may present an opportunity for the courts to decide this very important issue. Pending such a resolution, the Department does not believe an amendment is necessary because it continues to take the position that the Endangered Species Act does apply to the exercise of Indian treaty hunting rights as a reasonable and necessary nondiscriminatory conservation measure.

Question 11: In written testimony, Mr. Pitts of the Colorado Water Congress stated that the proposed recovery program for endangered fish species in the Upper Colorado River Basin calls for the establishment of a \$10 million capital fund for the acquisition of water rights in the upper Colorado River Basin. He recommended that the Endangered Species Act be amended to authorize \$10 million for fiscal year 1988 for this purpose. Does the Administration support this proposal?

Answer: The Administration does not support this proposal. We accordingly do not believe an amendment to the Endangered Species Act is necessary at this time to ensure the authorization of this fund.

Question 12: In written testimony, Mr. Pitts of the Colorado Water Congress recommended that the Endangered Species Act be amended to require the Secretary of the Interior to provide to Congress by March 1, 1988, reports of the progress made by the Upper Colorado River Basin Coordinating Committee and Platte River Basin Coordinating Committee. He further recommends that the reports include recommendations of reasonable and prudent measures, including necessary funding mechanisms, which can be utilized for avoiding jeopardy to and enhancing recovery of endangered species while respecting and maintaining applicable State and interstate water allocations and management systems.

Answer: We do not believe that such an amendment is necessary. The Secretary, through Bureau of Reclamation and Fish and Wildlife Service representation on the Colorado River Coordinating Committee, is making every effort to ensure that the conservation of endangered Colorado River fish species and State and interstate water allocation and management systems are compatible.

Question 13: To what extent, if any, has the 8th Circuit Court decision in *Sierra v. Clark* constrained the ability of the Fish and Wildlife Service to take threatened species that are predating on livestock?

Answer: The decision of the 8th Circuit Court and the implementing regulations published by the Service (50 FR 50793) on December 12, 1985, grant full authority to designated employees or agents of the Service (or the Minnesota Department of Natural Resources) to take depredating wolves (a threatened species in Minnesota) within one-half mile of the place where such depredation occurred. Any young-of-the-year taken on or before August 1 of that year must be released. Subsequent to the promulgation of these regulations, Animal Damage Control activities were transferred from the Department of Interior to the Department of Agriculture. On May 12, 1986, the Service issued an endangered species subpermit to the Animal and Plant Health Inspection Service (Department of Agriculture) to engage in wolf depredation control activities consistent with the Service's regulations.

Although the 8th Circuit Court decision affirmed the authority of the Service (and its subpermittees) to control depredating wolves, the court ruled that the Service could authorize public trapping of wolves as a means of further controlling depredating wolves and of implementing objectives identified in the Service's Eastern Timber Wolf Recovery Plan only if the measures were required by population pressures within the wolf population. This has limited the Service's ability to develop a cooperative relationship with landowners and stockgrowers victimized by depredation. This situation exacerbates an already difficult law enforcement problem in areas where livestock and these threatened predators overlap. Further, the decision has reduced the efficiency and effectiveness of the Service's depredation control program. A regulated sport harvest of threatened predators is likely to engender greater public cooperation and support, resulting in fewer illegal takings and the removal of a larger percentage of offensive individuals from the population, ultimately reducing the number of depredating animals in the predator population.

Question 14: Concern has been expressed to the Subcommittee that Federal agencies may not be complying with the Endangered Species Act consultation process, or that once they have received a jeopardy opinion, they may not be implementing the Service's "reasonable and prudent alternatives." The Center for Environmental Education cites as an example the following:

"The Center prepared a report for the EPA which reviewed its implementation of the ESA...."

To reduce the possibility that such a problem will occur in the future, it has been suggested that the Fish and Wildlife Service require Federal agencies to respond to the Fish and Wildlife Service indicating their intended actions to comply with the suggested alternative measures called for in the Service's Section 7 consultation opinions, and also provide a follow-up letter indicating when the "reasonable and prudent" alternatives had been completed. What is your reaction to this suggestion?

Answer: In the final regulations on interagency cooperation published jointly by the Fish and Wildlife Service and the National Marine Fisheries Service (June 3, 1986), subsection 402.15(b) states, "If a jeopardy biological opinion is issued, the Federal agency shall notify the Service of its final decision on the action." This was specifically included in the final regulations to keep the Service informed as to which alternative(s) the Federal agency intended to implement in order to avoid jeopardy to listed species or adverse modifications to critical habitat.

A follow-up system is presently being developed by the Service in the area of mitigation pursuant to the Fish and Wildlife Coordination Act. Once this system has been tested, its use for the consultation process will be considered.

QUESTIONS FOR THE RECORD
SUBMITTED BY CHAIRMAN WALTER B. JONES

Northern Rocky Mountain Wolf Recovery Plan

Question: A draft recovery plan calling for the reintroduction of the Rocky Mountain wolf into Yellowstone was released in October of 1985 and has gone through numerous revisions since that date. I understand that the Service is expected to make a decision on the latest recovery plan in mid-March. Has that decision been made, and if not, what obstacles remain?

Answer: The Service's Denver Regional Office will shortly complete an analysis of the comments received on the most recent review of the plan. The plan will be finalized and approved soon after that analysis is completed.

Endangered Species

Question: Despite amendments to the Endangered Species Act in 1982 designed to speed up the listing process, it is our understanding that a large percentage of final listing packages still fail to meet the listing deadlines. Could you submit for the record an analysis of how long it took to list every new species added to the endangered or threatened species lists since 1983 and could you explain why so many listing packages still fail to meet the listing deadlines?

Answer: The law requires either adoption of a final rule or withdrawal within 1 year of publication of a proposed rule, with a possibility of deferring the decision on a listing for an additional 6 months when there is scientific disagreement. Deferring a designation of critical habitat for 1 year also is possible.

Of 156 species listed since October 1, 1983, 66 (42%) were beyond the 1-year limit when final rules were adopted. Of 114 listings without critical habitat, 26 (24%) went over deadline. Of 42 listings with critical habitat, 40 (95%) went over deadline.

Final rules most frequently go over deadline when there is significant controversy regarding the justification for listing a species or designating its critical habitat. In some of these cases, repeated reopenings of public comment periods and the necessity to hold one or more public hearings have pushed final rules over the legislated limit. When faced with a situation where information upon which a proposal is based has been called into question, we have generally seen delay while additional information can be gathered as less undesirable than either unwarranted withdrawal of the proposal or unjustified listing of the species. The requirement that rules designating critical habitat be analyzed for probable economic consequences means that such rules take longer to process, and in some cases, this analysis results in the deadline being missed. In several instances (e.g., least Bell's vireo, Florida and Alabama beach mice, loach minnow and spikedace, Concho water snake), the Service has adopted final rules to list species while deferring designation of critical habitat in order to avoid having economic analysis unduly delay listings.

Question: The Fish and Wildlife Service conducts internal Section 7 review for all of its major programs. Could you please explain what internal Section 7 consultation process the National Marine Fisheries Service utilizes to document the compliance of its own programs with Section 7?

Answer: The National Marine Fisheries Service, like the Fish and Wildlife Service, conducts internal consultations on actions within their own programs that may affect listed species or critical habitat. These programs include Fisheries Management Plans and the issuance of scientific research permits.



**Center for
Environmental
Education**

20 March 1987

Honorable W.J. Tauzin
U.S. House of Representatives
Washington, D.C. 20515

Dear Representative Tauzin:

I wish to respond to several of the questions you raised at the recent hearing on the use of Turtle Excluder Devices in the southeastern shrimp fishery. As the hearing was necessarily brief, it was difficult to explore a number of issues fully. I would like to provide you with the results of our investigations regarding these issues.

1) What evidence supports the link between shrimp fishing and sea turtle mortality?

The literature and evidence supporting this link is extensive. I have enclosed a paper summarizing the literature as of 1979. Since then, of course, other information has become available. I presented some of this information in Exhibits B, D, F, G, H, I, J, and Q of my recent testimony before the House Subcommittee on Fisheries and Wildlife Conservation and the Environment.

The evidence is of several types. First, observers on government and commercial vessels have provided fully documented reports of sea turtle captures and mortalities. Second, in a series of interviews over the years fishermen have provided estimates of the number of turtles they incidentally catch and drown. You may refer to Exhibit G of my testimony for an example.

With reference to Louisiana and Kemp's ridleys specifically, I refer you to Exhibits H and K of my testimony. In 1984, fishermen reported catching five to ten Kemp's ridleys per boat in Oyster Bayou in Calillou Bay during a brief period; some of the animals were dead. As recently as last year, fishermen reported the capture of Kemp's ridleys in Texas and Louisiana waters before, during, and after the Texas closure.

During the years, adult female Kemp's ridleys have been tagged before they have left their nesting beach at Rancho Nuevo, Mexico. Of 109 long distance recoveries, 84 percent were by shrimp trawls. Also, 32 percent of them occurred in the waters of Louisiana. Many of these animals were dead. Scientists have also tagged head started Kemp's ridleys before they are released off Texas. Of 372 recoveries since 1978, 82 were by shrimp trawl. Also, 46 were recaptured off Louisiana, both inshore and offshore.

Whale Protection Fund • Seal Rescue Fund • Sea Turtle Rescue Fund • Marine Habitat Program

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The incidental capture and mortality of sea turtles in shrimp trawls is well-established. Furthermore, in the judgment of those who have investigated this problem most thoroughly, it is the gravest remaining threat to Kemp's ridley sea turtles and is contributing to a decline in loggerhead sea turtle populations along the Atlantic seaboard.

2) What evidence exists to justify requiring TEDs in the inshore of Louisiana, but not the inshore areas of North Carolina?

During the negotiations leading to the set of recommendations upon which NMFS has based its proposed regulations, the negotiating teams were presented with little evidence regarding the capture of sea turtles in the bays and sounds of North Carolina. The negotiating group deferred recommending that TEDs be required in inshore waters until additional information could be developed, either by NMFS or in the process of the public hearings on the proposed regulations.

By contrast, there is a wealth of information demonstrating that the capture of Kemp's ridley and other sea turtles in the inshore of Louisiana is a regular occurrence. I have referred to much of this evidence in my response to the previous question. Page 18 of Exhibit K of my testimony shows a useful map of some recent Kemp's ridley captures in Louisiana, many of them in inshore waters.

Finally, it may be useful to quote from a review of the status of the Kemp's ridley by Dr. Henry Hildebrand (see page 451 of Exhibit I):

Kemp's ridley could be logically labeled the Louisiana turtle because its greatest abundance is found there. It is beyond a doubt the commonest marine turtle in the state. However, it is concentrated in the shallow water from Marsh Island to the Mississippi Delta. Based on information supplied by shrimpers it has declined greatly in abundance during the past 25 years. There appears to be little prospect for a quick improvement in its survival status.

I might also add that the industry negotiating team insisted upon including the inshore of Louisiana in the requirements for use of Turtle Excluder Devices. As Michael Bean has described in his letter to you of March 18, Mr. Mialjevich was particularly insistent upon this point.

I hope that this information helps in your review of this complex problem. We remain hopeful that a satisfactory resolution of this problem can be fashioned.

Sincerely,



Michael Weber
Vice President for Programs

cc. Gerry Studts

ENVIRONMENTAL DEFENSE FUND

1616 P Street, NW
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April 17, 1987

The Honorable Gerry E. Studds
House Committee on Merchant Marine and Fisheries
Room 1334
Longworth House Office Building
Washington, D.C. 20515-6230

Dear Mr. Studds:

This responds to your letter of March 31, 1987, in which you asked two questions concerning a proposed amendment to the Endangered Species to require the monitoring of candidate species. Your questions and my responses to them are as follows:

Q. H.R. 1027, legislation passed by the House of Representatives in the 99th Congress, included a provision to require the Fish and Wildlife Service to monitor candidate species, and to use emergency listing authority to list those species when necessary. Do you believe this provision is still necessary.

A. Yes, the provision in question is still very much necessary. Currently, candidate species receive absolutely no protection under the Endangered Species Act. The Fish and Wildlife Service, other federal agencies, and the public in general have no legal obligations with respect to candidate species whatsoever. This is true even though the Fish and Wildlife Service has determined it already has sufficient information to warrant proposing for listing the nearly 1,000 candidate species in the United States that the Service has designated "category I candidates." The only reason that the Service has not acted to list -- and thus protect -- these species is that the Service lacks the resources to do so. In short, these species require the same rigorous protection that the Act provides for listed species, yet they get none.

In theory, the Service could act to head off any significant threat to the well-being of a candidate species by utilizing its emergency listing authority. That theoretical safeguard is of no avail, however, unless the Service has some effective means of monitoring the status of candidate species. There is considerable evidence that the

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The Honorable Gerry E. Studds
 April 17, 1987
 Page 2

Service currently lacks any systematic, well-designed program to monitor candidate species. That evidence includes the following:

- the Texas Henslow's sparrow apparently went extinct recently, even as the Service was trying to decide whether to list it;
- the Wyoming toad, though formally listed as endangered in 1984, was apparently already extinct by then; at least a few dozen were known to survive only four years earlier;
- the Guam bridled white-eye numbered about 2,000 in 1981, two years after the Governor of Guam had petitioned the Service for its listing; by the time it was finally listed in 1984, the bird was apparently extinct;
- the Guam rail underwent a similar rapid decline following the Governor of Guam's 1979 petition for its listing; an emergency listing in 1984 came too late to prevent its complete disappearance from the wild;
- the Wide-leaf warea, a plant, became a category 1 candidate species as a result of a 1979 survey that found only four populations of this species; five years later, the plant had still not been proposed for listing and a new survey found that the plant had disappeared from three of the four previously known sites; the plant is still not listed;
- Hymenoxys texana, a Texas aster, was first identified as a plant likely to need the Act's protection in the congressionally mandated Smithsonian Institution study of 1976; only three populations remained when the species was finally proposed in 1985 and two of these were destroyed by the time of its listing in 1986;
- The Mauna Kea Silversword, a spectacular Hawaiian flower, consisted of 35 naturally occurring specimens at the time of the 1982 status report on which its candidate status was based; the entire wild population was reduced to 15 by time of its 1986 listing;
- Achyranthes rotundata, an Hawaiian shrub, was also identified by the 1976 Smithsonian study, formally made a candidate species in 1980 and finally listed in 1986. Between 1981 and 1985, the population declined by 80%, from 2,000 to 400.
- several candidate plants are restricted to a type of wetland ecosystem known as "vernal pools" in the San Diego area; a recent survey revealed that between 1979, when the last comprehensive survey of area pools was done, and 1986, when the next such survey was done, more than 40 per cent of the vernal pools in San Diego had been destroyed as a result of filling under authority

The Honorable Gerry E. Studds
 April 17, 1987
 Page 3

of Corps of Engineers individual or nationwide general permits; the same study also revealed that a not one cent of the hundreds of thousands of dollars of money raised by means of special assessments on developers authorized to fill vernal pools has in fact been spent for pool acquisition and protection.

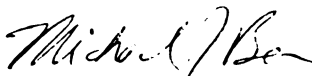
Q. If so, what specific actions do you believe the Fish and Wildlife Service should take to implement it?

A. If the proposed amendment is enacted, the Fish and Wildlife Service should take several specific actions to implement it. The object of these actions is to establish a systematic, well-designed program to monitor the status of candidate species in a way that is likely to detect changes in the status of those candidates or significant threats to their well being before those changes or threats result in loss of populations or significant diminishment of numbers.

The first step in such a program is to communicate to all appropriate Service offices and personnel the fact that developing effective means of monitoring each candidate species (initially emphasizing category I candidates) is a specific task to be undertaken by the Service. The mechanics of carrying out this task are likely to vary from species to species, but in many instances could be aided by the development of interagency agreements with other federal agencies, such as (1) an agreement with the National Park Service to cooperate in the designation of private lands containing candidate species as "national natural landmarks", (2) agreements with the Bureau of Land Management and Forest Service to incorporate in their wilderness study area inspection programs wherever possible visits to sites within such areas where candidate species (particularly plants) have been known to occur to determine the current status of the species there, (3) an agreement with the Bureau of Land Management or with its various state offices to provide for systematic monitoring of candidate species on designated "areas of critical environmental concern" that have been established for such species and to cooperate in the identification of additional such areas that may be appropriate for such designation, and (4) an agreement with the Environmental Protection Agency to cooperate in the latter's advance identification of wetlands likely to be unsuitable for filling so as to include in such areas all wetlands known to contain candidate species (an action that could well have avoided the tremendous loss of candidate species in the San Diego vernal pools had it already been undertaken).

In addition to these interagency agreements, the Service should identify the other measures necessary to ensure effective candidate species monitoring, support such of it as possible with grants to state agencies under Section 6 and identify annually to Congress the additional monitoring work that could be carried out through Section funding if sufficient funds were available. The Act may currently give the Service adequate authority to undertake all the specific actions recommended here. The fact that it has failed to do so, however, and the further fact of the documented tragic losses and declines of candidate species, mean that it is imperative that Congress now direct it to initiate a candidate monitoring program.

Sincerely,



Michael J. Bean
 Chairman, Wildlife Program

April.13,1987

Honorable Gerry E. Stubbs,
U.S. House of Representatives

Dear Sir,

In reference to letter dated March.31,1987 concerning TED use.

Opponents of TED use who arge that the cost of the TED would cause a serious enconomic threat to the Shrimp industry are correct.

For the past five years or more some of our group has been working with N.M.F.S. and Georgia Sea Grant to develope a workable device.

Most gave up in failure, immediately others built or purchased the N.M.F.S. TED and tried to make it work, but finally put it on the dock.

The main reason was shrimp loss. I explained during the negotiations that the figures I used were from fishermen that pulled the device in all weather, tides and other conditions faced by fishermen each day. The last vessel to pull a N.M.F.S. TED said he had a 18% loss.

The cost of devices, spares and loss of shrimp would be alarming.

One of our shrimpers who tried the Georgia device owns and operates a 44 foot vessel with a 671 GM engine. He states that he compared his catch with the device in one of his two nets and he estimates up to 25% shrimp loss.

I don't feel the N.M.F.S. figures are acturate because they are not representative of all areas,dept, weather conditions, size of vessels, net size and type of shrimp being caught. They don't have the data.

The cost of insurance to shrimpers has tripled in the last three years. The use of TEDs by the industry I feel had nothing to do with the increase, however there has been no claims related to use of TEDs to my knowledge. If the insurance companies began receiving TED related claims I am sure the cost of insurance will incease. The Georgia device seems to be the answer on the Georgia coast for the larger vessels with larger nets.I feel that no device has been developed that will solve the problem.



P.O. Box 609·Richmond Hill, Georgia 31324·(912) 727-2126

I feel that voluntary use, shortens tow time, recitation on board, education programs and tagging programs on the shrimp industry part have shown a decrease in strandings and if the other causes of Sea Turtles related mortality were addressed the same effect would be visible.

Sincerely,

Leonard W. Crosby, Jr.
Leonard W. Crosby, Jr.
B.F.C. Manager

LWC/kaj



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 14 1987

THE ADMINISTRATOR

Honorable Gerry E. Studds
Chairman, Subcommittee on Fisheries and Wildlife
Conservation and the Environment
Committee on Merchant Marine and Fisheries
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your letter of March 31. I appreciate this opportunity to provide you the enclosed information on the Environmental Protection Agency's (EPA) activities to implement the Endangered Species Act for inclusion in the record of the March 17 hearing on reauthorization of the Endangered Species Act. EPA, like other agencies, is subject to the requirements of this Act and the related regulations of the U.S. Fish and Wildlife Service. The law requires that EPA avoid adverse impacts on endangered species and their habitats in carrying out our programs. In addition to complying with the law, I believe EPA has a special obligation to protect endangered species in view of the Agency's over-all mission of environmental protection.

I hope this summary will be useful to you. Please contact us if you need further information.

Sincerely,
A handwritten signature in dark ink, appearing to read "Lee M. Thomas".

Lee M. Thomas

Enclosure

Question 1: Section 1(a)(1) of the Act directs all federal agencies to "utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of" the species it protects. Please outline for the Subcommittee how EPA has implemented this directive and specifically detail what programs it is carrying out for the conservation of such species. Also please provide for us detailed information concerning how EPA has communicated this legislative directive to its field officials.

Answer 1: Requirements for compliance with the Endangered Species Act (ESA) are generally built into implementing regulations or guidance for the relevant EPA programs. EPA has chosen to implement its responsibilities under the ESA through specific requirements developed as appropriate by its individual program offices, rather than through a centralized procedure. The Office of Federal Activities (OFA) within the Office of External Affairs in EPA maintains general oversight of ESA implementation and issues. The OFA and the Office of Policy, Planning and Evaluation also carry out special studies from time to time on ESA implementation.

For the EPA programs that are subject to the National Environmental Policy Act (NEPA) our NEPA regulations (40 CFR Part 6) require that protection of endangered species and their habitats be considered as part of the NEPA review process. Programs included under this regulation are: municipal wastewater treatment plant construction grants, new source NPDES permits in undelegated states and the Outer Continental Shelf, construction of EPA facilities, and research projects carried out by our Office of Research and Development. Compliance with the ESA is also addressed in various guidance documents related to NEPA compliance, most recently in guidance issued by EPA to its regional offices on carrying out oversight of state environmental reviews which are done under construction grants delegation.

EPA regulations under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (40 CFR Sections 155 and 158) require that impacts on endangered species be considered in the registration process. The EPA Office of Pesticide Programs consults with the Fish and Wildlife Service and the Endangered Species Office of the Department of the Interior on individual registration reviews. Impacts on endangered species may be mitigated by labelling requirements or other registration conditions. In 1986, EPA carried out a study of the pesticides program's activities in support of the Endangered Species Act. As a result of this study a number of initiatives have been undertaken to improve EPA's performance in this area. The program is currently eight months into a seven work-year, \$300,000 effort to implement an endangered species management plan (copy enclosed). This is currently being evaluated and modified for use by the EPA Office of Toxic Substances in administering the Toxic Substances Control Act.

EPA's regulations (40 CFR Section 270.3) under the Resource Conservation and Recovery Act (RCRA) require that permits for waste treatment storage and disposal facilities be issued in a manner (and contain conditions) which are consistent with applicable federal laws, including the Endangered Species Act. In October 1983, a guidance memorandum on compliance with these laws was issued by the Office of Solid Waste, which advised hazardous waste managers in EPA regional offices to establish procedures to ensure compliance with these laws, primarily by establishing contacts in the other federal agencies and advising applicants that these laws apply. In addition, we are currently working on location standards that will influence the granting of permits for hazardous and solid waste facilities. These standards will include protection of natural habitats and endangered species as factors in facility siting.

EPA's Superfund clean-up program under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) incorporates consideration of endangered species and habitats during its Remedial Investigation/Feasibility Study (RI/FS) process which is central to the selection of remedial actions at hazardous waste sites. Under RI/FS guidance issued in 1985 the EPA regional offices are to consult with the Fish and Wildlife Service regarding whether there may be impacts on endangered species as a result of a remedial action alternative. EPA is currently developing guidance on Superfund compliance with other environmental laws which specifically requires that the applicable or relevant and appropriate requirements of the ESA, as well as other environmental laws, be identified and complied with during response actions.

Water quality and aquatic habitat protection goals identified in the Clean Water Act and species conservation goals set out in the Endangered Species Act are clearly linked and EPA has several specific program areas which address this linkage. Thus, EPA regulations (40 CFR Sec. 122.49(c)) require the Agency when issuing NPDES permits to take into account protection of endangered species. Similarly, EPA regulations (40 CFR Section 230.10(b)(3)) prohibit the issuance of Section 404 permits that would jeopardize endangered species.

In addition, EPA's draft groundwater classification guidelines incorporate concerns for endangered species in deciding whether or not Class I designation (special and vulnerable aquifers) is appropriate. For example, the guidelines address whether the aquifer discharges to a wetland or other surface water where there would be an impact on an endangered species or its habitat.

In its program for ocean disposal site designation under the Marine Protection, Research, and Sanctuaries Act EPA coordinates with the National Marine Fisheries Service (NMFS) and the FWS prior to final designation of ocean disposal sites. Site designation for ocean disposal of dredged materials is delegated to the EPA regional offices, and the Ocean Dumping Site Designation Delegation Handbook for Dredged Material requires formal compliance with the ESA through coordination with the NMFS and FWS. Compliance with the ESA is also required in the Agency's ocean disposal permit program.

Under Section 301(h) of the Clean Water Act the Agency is authorized to modify secondary treatment requirements for discharges into marine waters by publicly owned treatment works. EPA regulations (40 CFR Section 125) require waiver applicants to demonstrate that modified discharges be consistent with the ESA. EPA's 301(h) Delegation Handbook also requires regional offices to coordinate with NMFS and FWS prior to making a decision to approve these modification requests.

Finally, EPA addresses endangered species issues in its reviews of environmental impact statements and environmental regulations prepared by other agencies. EPA performs these reviews under Section 309 of the Clean Air Act. These reviews include a wide range of environmental policy considerations. On endangered species issues specifically, EPA will point out potential problems, although the Agency generally defers to the National Marine Fisheries Service or the Fish and Wildlife Service on more detailed follow-up to them.

Question 2(a) and (b): Since 1980, the U.S. Fish and Wildlife Service has identified a large backlog of "candidate species" that appear to meet the biological criteria for listing under the Act, but that will very likely not be listed for many years because of the Service's limited resources for listing.

(a) What, if any, policies has EPA adopted with respect to activities it authorizes or carries out that affect such candidate species?

(b) How, if at all, does EPA ensure that its field personnel are kept apprised of the Service's lists of candidate species and their potential occurrence in areas subject to EPA regulatory authority?

Answer 2(a) and (b): The Agency does not have either over-all or program regulations which specifically address how to treat these species. While EPA does not address candidate species in the pesticides registration process, the Agency does consider those that are proposed for inclusion on the list. If it appears that there will be an effect on a proposed species EPA will consult with the FWS. Of course, to the extent that some candidate species co-exist with listed species protection of the latter will also benefit the former. In the other programs (construction grants, RCRA, Superfund) any consideration of candidate species would be included as part of the over-all environmental review, and the FWS may provide information on candidate species in reviewing site-specific actions. EPA also addresses candidate species on a selected basis in its reviews of other federal agencies' EISs.

Under the Clean Water Act Section 404(b)(1) guidelines EPA is required to review Section 404 permit applications to assure not only that endangered species are protected, but also to prohibit activities that will result in adverse effects to fish, wildlife, special aquatic sites and on aquatic diversity, productivity and stability. Although candidate species are not specifically mentioned they would be covered under this regulation. The 404 Advanced Identification Guidance (see question 2(c)) being developed to assist regional offices in more effectively protecting bottomland

hardwood and other wetlands will specify that candidate species, as well as endangered and threatened species, be considered in the Advanced Identification Process. The Office of Wetlands Protection also regularly provides EPA regional offices with information on proposed, threatened, and endangered species that are likely to occur in or utilize wetland habitats in their region.

Question 2(c): The Subcommittee is aware that the EPA has recently increased its efforts to identify in advance of any proposed filling activities those wetlands and other aquatic areas that EPA believes to be unsuitable for filling under Section 404 of the Clean Water Act. Has EPA considered as a matter of general policy working with the Fish and Wildlife Service to delineate specific areas where wetland-dependent or aquatic candidate species occur and then designating such areas as unsuitable for filling?

Answer 2(c): The Office of Wetlands Protection in EPA is currently developing lists of Priority Wetlands in each of the ten EPA regions. This effort is designed to identify the nation's most ecologically valuable and vulnerable wetlands. Wetlands included by the U.S. Fish and Wildlife Service within key rivers where endangered species recovery plans have been developed or critical habitat areas identified will be strongly considered for inclusion in the EPA Priority Wetlands Lists.

In addition, EPA is increasing its effort to identify wetlands or other aquatic areas that are determined to be either suitable or unsuitable for discharges of dredged or fill material in advance of applications for Section 404 permits. Wetlands deemed unsuitable as discharge sites under the advanced identification process will generally also be included in a Regional Priority Wetland List. EPA may also consider initiating the advanced identification process for wetlands not on a priority list in situations where the FWS requests that a threatened critical habitat for an endangered species be protected.

EPA is also working with the FWS on development of the Department of Interior's National Wetlands Priority Conservation Plan. This Plan is being developed to assist decision-makers in identifying wetland interests, and the types and locations of wetlands warranting consideration for federal and state acquisitions in accordance with Section 301 of the Emergency Wetlands Resources Act. The Plan is intended to link closely with EPA's Priority Wetlands Lists and to stress the importance of acquiring threatened wetlands that serve as critical habitats for threatened or endangered species.

Question 3: In the 99th Congress this Subcommittee recommended, and the full House agreed, that the Endangered Species Act be amended to require the monitoring of candidate species to ensure that they do not decline further or even disappear before they can be listed under the Act. How can EPA assist in this monitoring effort? Would EPA's assistance in this effort require additional resources and, if so, what are those additional resources.

Answer 3: Monitoring of these species would primarily be the responsibility of the Department of the Interior, since EPA does not have either the systems or the resources to monitor wildlife on a regular basis. EPA will upgrade its system for notifying regional program offices of both threatened and candidate species in cooperation with the Office of Endangered Species. Information developed in site-specific EPA reviews could prove useful in assessing impacts on candidate species. This would not be resource-intensive.

Editor's Note:

Representatives of conservation organizations brought to the attention of Chairman Jones deficiencies in the law enforcement programs of various Departments under the Endangered Species Act (ESA) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The following five letters explore some of these charges, focusing on the role of Animal and Plant Health Inspection Service (APHIS) in controlling the import and export of plants.

NINETEENTH CONGRESS

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 1

U.S. House of Representatives
Committee on
Merchant Marine and Fisheries
Room 1334, Longworth House Office Building
Washington, DC 20515

September 5, 1986

The Honorable Richard E. Lyng
 Secretary
 Department of Agriculture
 Washington, D.C. 20250

Dear Mr. Secretary

Over the past few months, representatives of conservation organizations have brought to my attention what they consider to be serious deficiencies in the law enforcement programs of various Departments under the Endangered Species Act (ESA), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and other laws dealing with illegal trade in fish, wildlife and plants.

These allegations are a matter of concern to me as Chairman of the Committee on Merchant Marine and Fisheries, which has jurisdiction over both the ESA and CITES. The ESA is widely recognized as a model conservation statute for the entire world. Moreover, our country played a leading role in the development of CITES and has actively encouraged other countries to improve their enforcement efforts. I am, therefore, distressed by some of the allegations which have been made with respect to your Department's enforcement of controls over the import and export of plant species afforded protection under the ESA or CITES. Within the Department of Agriculture, these responsibilities historically have been delegated to the Animal and Plant Health Inspection Service (APHIS).

Your Department was given these responsibilities with respect to plants because of its specialized knowledge and appreciation of the value of all plant life. Some of the allegations which have been raised with regard to the Department of Agriculture are set forth below:

OFFICIAL
 SECRETARY
 USDA

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The Honorable Richard E. Lyng
 September 5, 1986
 Page Two

Absence of Prosecutions -

Since CITES came into force a decade ago, it has been stated that APHIS has prosecuted only one alleged violator -- in 1978. Promulgation of implementing regulations for CITES in 1984 (49 FR 42912-42918) does not appear to have resulted in increased enforcement efforts. It has been stated that the only CITES cases in recent years have been brought by the U.S. Fish and Wildlife Service (FWS), not APHIS.

Despite the dearth of cases, it has been suggested that there has been evidence of numerous violations of CITES controls regarding both imports and exports:

- o During 1978-1980, the source of information on the 1978 cycad case referred to above supplied documented tips on at least three other illegal imports; no prosecutions resulted.
- o In December 1983-January 1984, a non-governmental conservation organization reviewed 1982 plant export records based on APHIS pest and health inspections. This search uncovered several probable violations of CITES, including exports of over 10,000 cacti, 10,000 lady slipper orchids, and almost 3,000 pitcher plants. Other than a case brought by the Fish and Wildlife Service, no cases have been brought as a result of this review.
- o In 1984, APHIS allowed the importation of 3,900 Appendix I cacti because they were listed on the Mexican permit under 2 synonyms -- even though these synonyms had been clearly mentioned on the CITES listing proposals, which were prepared by the United States. A similar number were probably imported in 1985 prior to a conservation organization bringing the matter to FWS and APHIS attention.
- o In late 1985, the Arizona "cactus cops" uncovered evidence of continuing illegal importations of about 300,000 cacti from Mexico. FWS is now investigating, but APHIS has denied responsibility because the initial evidence arose from interstate shipments rather than imports.

Scrutiny of Foreign Permits/Shipments -

Both before and after issuance of the regulations, it has been alleged that APHIS has refused to "look behind" foreign CITES permits to ensure that the plants in the shipments really fit the explicit conditions on the permit:

The Honorable Richard E. Lyng
September 25, 1986
Page Three

- o In March 1983, TRAFFIC (U.S.A.) informed FWS and APHIS that the 30,000 cycads entering the country each year from the Dominican Republic were actually taken from the wild, despite the use of CITES documents suitable for propagated plants. It has been stated that APHIS refused to prohibit imports until FWS instructed them to do so.
- o In March 1985, APHIS still insisted that it had no authority to refuse entry for plants taken from the wild if documented with propagation certificates. FWS law enforcement officials maintain that the inspecting officer -- in this case, an APHIS employee -- does carry the responsibility for detaining and initiating investigations of suspicious shipments. It has been stated that APHIS' stance means that thousands of cacti and other succulents that are probably of wild origin continue to enter the country with improper propagation documents from West Germany and Madagascar.

Implementation of APHIS Regulations -

It has been alleged that APHIS may not be properly implementing its own regulations. Many of the illegal exports revealed by the review of 1982 APHIS export documents had been issued phytosanitary certificates by officials of state cooperating agencies. Nevertheless, APHIS now relies on two such agencies, California and Florida, to inspect and approve exports of allegedly propagated CITES protected plants. This practice appears to be in conflict with APHIS' regulations, specifically the footnote to section 355.2(6). It has been suggested that this practice will allow continued export of wild plants incorrectly described as propagated.

I would very much appreciate your having the appropriate persons in your Department review the foregoing allegations and provide me with a response to them. In addition, I would appreciate receiving answers to the following questions together with a description of your Department's law enforcement program:

- o How many allegations of violations of CITES has APHIS received since CITES came into effect in 1975? How many of these allegations has APHIS investigated? How many has APHIS asked the U.S. Fish and Wildlife Service to investigate on its behalf?
- o How many civil penalties, other than forfeiture of the plants themselves, has APHIS imposed on plant importers or exporters who have not complied with CITES?

The Honorable Richard E. Lyng
September 5, 1986
Page Four

- o Is there currently a contractual or other formal agreement with FWS under which such alleged violations may be investigated? If so, please supply a copy. If not, which agency is now investigating alleged violations of CITES?
- o How many APHIS staff are trained in investigating alleged violations and preparing criminal cases?
- o APHIS regulations, specifically the footnote to section 355.2(b), explicitly require that plants protected by CITES or the ESA and intended for export "be presented at the port for export together with the documents" at the time of validation of CITES or ESA export documents. Are plants, which are claimed to be artificially propagated and which are inspected by cooperating State phytosanitary officials in Florida or California, now presented to APHIS personnel at a designated port at the time of validation of the export documents? If not, how does APHIS explain this variance from its own regulations? Under what statutory authority did APHIS transfer effective Federal enforcement powers to State agencies?
- o Does the application for APHIS' "General Permit" require information as to the source of the applicant's plants, specifically whether they are propagated in accordance with CITES definitions? The regulations (section 355.11, p. 42913) do not appear to request such information. If not, on what basis does APHIS assert that these General Permits conform to the resolution, Conf. 5.26, adopted by the Parties at the Fifth Meeting of the Conference of the Parties to CITES?

This letter is part of an overall review of the effectiveness of U.S. enforcement of laws designed to prevent illegal trade in fish, wildlife, and plants due to the expressed concerns and allegations of a number of conservation organizations. Similar letters are being sent to the Secretaries of all of the involved Departments. I am hopeful that this thorough review will result in proposals to deal with any deficiencies which may, in fact, exist. Such enhanced cooperation would eliminate the need for Congress to pursue this matter further.

Your cooperation and early response will be greatly appreciated. I am certain that, working together, we can enhance our current enforcement program to control illegal trade in endangered and threatened species of plants.

With kind regards, I am

Sincerely,

Walter B Jones
WALTER B. JONES
Chairman



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20250

OCT 30 1986

Honorable Walter B. Jones
Chairman, Committee on Merchant
Marine and Fisheries
House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Thank you for your letter of September 5, 1986, on behalf of conservation organizations about our Department's enforcement of the Endangered Species Act (ESA) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

We share your concern about illegal trade in endangered plant species and agree that the United States Government has played a leading role in developing CITES and in actively encouraging other countries to improve their enforcement efforts. Member countries of the treaty have congratulated the Department of Agriculture (USDA) for having the most effective enforcement program for plants in the world and have looked to our Animal and Plant Health Inspection Service's (APHIS) program for ideas on how better to enforce CITES. We appreciate the opportunity to answer your questions and have prepared our answers in the order in which you asked the questions in your letter.

Prosecutions

When we began enforcing CITES in 1978, the present regulations were not yet written; nevertheless, we were able to gather enough evidence to forward one case for prosecution. Although tips on other illegal imports and exports were thoroughly checked, the evidence we found would not support prosecution.

From the beginning of our enforcement efforts, APHIS has worked closely with the Department of the Interior's Fish and Wildlife Service (FWS) in the investigation of probable violations of CITES. The exportation of 10,000 ladyslipper orchids was investigated by the FWS, which gathered enough evidence to prosecute the violators.

In the 1984 cacti case, our inspector, a highly qualified botanist, failed to determine that the cacti proposed for import were the ones listed on Appendix I of the treaty. This error occurred because of the complexity of the nomenclature system used to name cacti.

Interior's authority to prosecute CITES violations extends to interstate commerce. Before APHIS can become involved, we must have evidence that the violations are related to international movement of plants. Nevertheless, because of our good working relationship with the FWS, we continually cooperate informally with that Agency to stop illegal importations of materials protected under CITES.

Honorable Walter B. Jones

2

Foreign Permits/Shipments

APHIS will seize plants protected by the Convention if it can establish that they are actually taken from the wild but are certified to be artificially propagated. However, often it is very difficult to legally establish that plants from foreign countries have come from the wild. When a foreign government issues official documents for plants it is exporting, we must accept the documents as valid in the absence of sufficient evidence to the contrary. When we received reports that the cycads entering the country from the Dominican Republic came from the wild instead of from propagated plants, we threatened to stop all further shipments with documents stating the plants were artificially propagated. At this point, the Government of the Dominican Republic issued a legal document removing the statement that the plants were artificially propagated and stating instead that the plants were allowed to be exported and would not adversely affect the plant population in that country.

APHIS Regulations

APHIS has received several allegations of violations of CITES since we began enforcing the treaty. However, unlike the FWS, which has its own law enforcement division with armed investigative personnel, the USDA relies on its Plant Protection and Quarantine (PPQ) officers working at inspection stations and ports of entry to catch violations, confiscate prohibited material, and refer actions for civil penalties or for criminal prosecution as appropriate. Calls from outside sources on possible violations are not recorded, and records are not kept on this kind of information. Nevertheless, two cases of alleged violations were initiated. Although both cases are still pending in court, we hope their resolution will set a positive precedent for plant-related violations.

Although we believe that forfeiture of the plants is sufficient penalty in many cases, we will recommend civil penalties or criminal prosecution if we believe it is necessary to achieve compliance with the ESA and CITES. In June of this year an import company attempting to bring in orchids without CITES documentation was assessed civil penalties on several counts, including a violation of the ESA. Through a consent decision, the importer paid a \$750 civil penalty.

Currently there is no formal agreement between APHIS and the FWS to investigate CITES violations. However, a formal agreement in effect for a year ended on the last day of September 1985. Both Agencies are now investigating other options for working together, and we continue to exchange information on an informal basis.

As we explained above, APHIS has no law enforcement arm similar to that in the FWS, but relies instead on its officers to intercept illegal materials coming into the country. However, our Office of Inspector General investigates violations of the ESA and CITES. Also, our Office of the General Counsel litigates administrative actions by the USDA and refers criminal cases to the Department of Justice for prosecution.

Honorable Walter L. Jones

3

Federal phytosanitary certificates for endangered species of plants can only be issued by PPG officers assigned to designated ports or at a nondesignated port if Interior allows it under the ESA.

The general permit does not require the applicant to state the source of his or her plants. Either PPG officers, or State cooperators, or both determine if plants are artificially propagated by examining the plants or visiting the exporter's growing facility.

We are pleased to answer your questions on our involvement in endangered plant species, and we hope this information is helpful.

Sincerely,

Si Karen K. Darling

Mr. Edwin M. Weese, III
 Attorney General
 Department of Justice
 Washington, D.C. 20530
 Mr. J. Edgar Hoover
 Director, Federal Bureau of Investigation
 Washington, D.C. 20535
 Mr. Clegg
 Mr. Glavin
 Mr. Ladd
 Mr. Nichols
 Mr. Rosen
 Mr. Tracy
 Mr. Carson
 Mr. Egan
 Mr. Gurnea
 Mr. Hendon
 Mr. Pennington
 Mr. Quinn
 Mr. Nease
 Mr. Tamm
 Mr. Winterrowd
 Mr. Tele. Room
 Mr. Mr. Holloman
 Miss Gandy

Mr. Edwin M. Weese, III
 Attorney General
 Department of Justice
 Washington, D.C. 20530

U.S. House of Representatives
Committee on
Merchant Marine and Fisheries
 Room 1334, Langworth House Office Building
 Washington, DC 20515-6230

September 5, 1986

The Honorable Edwin Weese, III
 Attorney General
 Department of Justice
 Washington, D.C. 20530

Dear Mr. Attorney General:

Over the past few months, representatives of conservation organizations have brought to my attention what they consider to be enforcement deficiencies under the Endangered Species Act (ESA), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and other laws dealing with illegal trade in fish, wildlife, and plants.

As a result of these allegations, I am asking all of the Departments involved with the enforcement of these laws to thoroughly review their programs and to provide me with full reports thereon, including how the various Departmental programs are coordinated to achieve the desired results, what deficiencies presently exist, and what steps can be or are being taken to deal with these deficiencies. I am enclosing copies of my letters to other Departments for your information.

No allegations were made with respect to your Department's handling of such matters. In fact, we received complimentary comments regarding the dedication of your Wildlife and Marine Resources Section so the attorneys in that section are to be commended.

However, the following information requested is necessary to provide a complete picture of our overall program to control illegal trade in fish, wildlife, and plants. Your Department is in a unique position to comment on the effectiveness of our enforcement efforts in this area. Therefore, I would appreciate your providing me with information on the number of cases relating to illegal trade in fish, wildlife, and plants that have been forwarded to your Department since 1981 for prosecution by each of the Departments involved (e.g., Interior, Commerce, Treasury, and Agriculture); how many of these cases your Department declined to prosecute; and the rate of successful prosecution of those cases you pursued. In addition, I would welcome any comments that you may wish to make regarding the

The Honorable Edwin Meese, III
September 5, 1986
Page Two

effectiveness of our overall enforcement program and how it may be strengthened to bring about more successful prosecutions of violators of our nation's conservation laws. In particular, I would like to know what the status is of the Interagency Wildlife Law Enforcement Coordinating Committee established by Presidential directive?

I sincerely hope that this review will enable the agencies and Departments involved to eliminate any deficiencies which may exist. Such enhanced cooperation would eliminate the need for Congress to pursue this matter further. Your cooperation and early response will be greatly appreciated. I feel certain that, working together, we can enhance our current enforcement program to control illegal trade in endangered and threatened species.

With kind regards, I am

Sincerely,


WALTER B. JONES
Chairman

Enclosures



U.S. Department of Justice

Office of Legislative and Intergovernmental Affairs

Office of the Assistant Attorney General

Washington, D.C. 20530

26 NOV 1986

FREEDER WARD

COMMITTEE ON ENVIRONMENTAL AND
NATURAL RESOURCES

Honorable Walter B. Jones
Chairman
Committee on Merchant Marines
and Fisheries
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

We are pleased to respond to your letter of September 5, 1986, directed to this Department's role in enforcement of federal wildlife laws dealing with illegal trade in fish, wildlife, and plants. We appreciate your kind words regarding the dedication of the attorneys in the Department's Wildlife and Marine Resources Section.

As you know, the Department established the Wildlife Section in 1979, as part of the Land and Natural Resources Division. In 1981, that section was consolidated with the former Marine Resources Section. The Wildlife and Marine Resources Section is responsible for civil and criminal enforcement of federal laws relating to trade in fish, wildlife, and plants. The Department is committed to a strong and effective wildlife enforcement program.

The principal statutes regulating trade in fish, wildlife, and plants are the Lacey Act Amendments of 1981 and the Endangered Species Act of 1973. The latter also implements the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), to which the United States is a party. Other statutes regulating trade in specific species are the Bald Eagle Protection Act, the Migratory Bird Treaty Act, and the Marine Mammal Protection Act. The Departments of the Interior, Commerce, Treasury, Transportation, and Agriculture each have enforcement responsibilities under these statutes.

You have asked for the number of cases relating to illegal trade in fish, wildlife, and plants that have been referred to the Department of Justice for criminal prosecution by each of the aforementioned Departments since 1981. The following are figures of all criminal cases referred directly to the Wildlife and Marine Resources Section and field cases which that Section has monitored for the years in question. Although the Wildlife Section

handles directly or tracks many of the prosecutions involving illegal wildlife trade, the enforcement agencies do refer cases directly to the United States Attorneys which may not be reflected in these statistics. Thus, these figures will not necessarily agree with statistics provided by other agencies.

Referrals, 1981-September 1986

AGENCY	1981	1982	1983	1984	1985	September 30, 1986	TOTAL
INTERIOR	132	170	136	245	123	180	986
COMMERCE	7	11	24	10	16	14	82
TRANSPORTATION	4	3	5	0	0	2	14
TREASURY	7	3	0	2	0	4	16
AGRICULTURE	0	0	2	0	0	0	2
	150	187	167	257	139	200	1,100

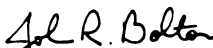
Generally, the Wildlife Section declines prosecution of approximately one-third of the subjects investigated. The reasons and percentages for these refusals are: insufficient evidence (50%); other civil remedies are more effective (10%); deferral to state prosecution (40%). The Section is successful in approximately ninety percent of its prosecutions, obtaining either convictions or guilty pleas.

The Department of Justice has a particularly close working relationship with the law enforcement agencies at Interior and Commerce. At periodic meetings with representatives of these agencies we prioritize investigations to make optimal use of available resources. We also coordinate with all agencies involved in wildlife enforcement through the Interagency Wildlife Law Enforcement Coordinating Committee. Although the full committee has not met recently, various task force groups have convened on a more frequent basis. We also consult closely with other nations interested in cooperative wildlife enforcement and with private organizations such as the World Wildlife Fund.

We applaud your interest in the effectiveness of our federal wildlife enforcement efforts. We may, in the coming session, recommend some relatively modest legislative clarification designed to overcome certain judicial misconstructions that could hamper the program. (One example is the recent Ninth Circuit opinion that payments for illegal guiding services do not amount to

sales of wildlife for purposes of the Lacey Act felony provision. United States v. Stanberg, et al., Nos. 85-3031, 85-3033, 85-3040 (9th Cir. October 21, 1986)). The United States has traditionally taken a leading role internationally in wildlife preservation. Through close cooperation with the lead Departments with responsibility for wildlife enforcement, we will strengthen our roles in combatting illegal trade in fish, wildlife, and plants.

Sincerely,



John R. Bolton
Assistant Attorney General



January 30, 1987

**Natural Resources
Defense Council**

 1350 New York Ave., N.W.
Washington, DC 20005
202 783-7800

Mr. Donald Thompson
APHIS-PFO
Room 633, Federal Building
6505 Belcrest Road
Hyattsville, MD 20782

Dear Don:

As you remember, my letter of December 2nd asked that APHIS amend its regulations implementing CITES in order to require plant importers to declare whether the plants were of wild or propagated origin. As justification for that change, I cited the importation of tens of thousands of cycads from the Dominican Republic and the thousands of succulents from the Federal Republic of Germany and Madagascar -- plants which the importer clearly knew to be of wild origin, but which were imported under artificial propagation certificates.

As you may remember further, I have sought for over a year that APHIS deny entry to the improperly documented succulents from Germany and Madagascar. I refer you to my letter of January 28, 1986 and frequent telephone calls last spring.

You attended the meeting of the Plant Working Group in June, 1986 at which the presence of wild-collected succulents in West Germany received considerable attention. You also drove us to Zurich, where we discussed this topic further with the director of the Municipal Collection of Succulents.

You may not have known that I personally arranged for botanists at the New York Botanical Garden to volunteer to go to Kennedy International Airport to inspect incoming shipments of succulents; and that Mr. Peter Grosser promised me that he would alert those botanists when shipments arrived.

Therefore, I am distressed to learn from the permits on file at the Wildlife Permit Office that during the period July-December 1986, the United States once again allowed the importation of 8 shipments containing 2,216 succulents (belonging to the genera Euphorbia, Pachypodium, and Allaudia) from the Federal Republic of Germany and 3 shipments containing 683 succulents (belonging to the genera Euphorbia and Pachypodium) from Madagascar. All of these plants were documented to be artificially propagated.

Clearly, this problem remains acute. Therefore, the Natural Resources Defense Council renews its request that the Animal and Plant Health Inspection Service take immediate steps to curb importation of improperly documented wild-collected plants. We

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New York, New York 10018
212 949-0049

Western Office:
25 Kearny Street
San Francisco, CA 94108
415 421-6561

New England Office:
850 Boston Post Road
Sudbury, MA 01776
617 443-6300

Toxic Substances
Information Line:
USA: 1-800-648-NRDC
NYS: 212 687-6862

urge you to instruct port personnel immediately to hold shipments of plants when they are suspicious about the plants' declared origins (or believe the permit to have been altered, or in other suspicious circumstances) until the circumstances can be clarified. Further, we ask that APHIS begin immediately the process of amending its regulations.

Once the regulations have been amended, we expect that penalties will be sought again habitual abusers who can be shown to have known the true origin of the plants they are importing but who use the propagation certificates to circumvent CITES protections.

Thank you for your assistance on this matter. I look forward to a prompt reply.

Sincerely,



Faith Thompson Campbell, Ph.D.

cc: Dr. Bruce MacBryde, OSA
Mr. Clark Bavin, LE
Mr. Donald Carr, DOJ
Ms. Ginette Hemley, TRAFFIC

The Nature Conservancy

1800 North Kent Street, Arlington, Virginia 22209
(703) 841-3500

April 6, 1987

Congressman Gerry E. Studds
1501 Longworth House Office Building
Washington, D.C. 20515

Dear Congressman Studds,

The Nature Conservancy commends you for sponsoring the Reauthorization of the Endangered Species Act and for holding hearings. We wish to submit the enclosed testimony, and we respectfully request that you include it in the record.

We feel that it is crucial to pass a five year reauthorization this year. In our testimony we urge the Committee to authorize at higher funding levels to respond to the urgent need for additional resources. In particular, we are concerned that Section 6 grants to the states be increased to enable more states to carry out effective endangered species programs. Additionally, we support amendments to increase protection for plants on non-federal land and to give the Secretary authority to increase protection of candidate species.

The Nature Conservancy stands ready to assist in any way as the Committee considers this fundamentally important conservation measure. Thank you for your time and attention, and do not hesitate to call if we can provide further information.

Sincerely,



Carol Lee Baudler
Assistant Director Government Relations



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The Nature Conservancy

THE NATURE CONSERVANCY
INCORPORATED

STATEMENT OF THE NATURE CONSERVANCY

FRANK D. BOREN, PRESIDENT

SUBMITTED TO THE HOUSE SUBCOMMITTEE ON FISH AND WILDLIFE CONSERVATION
AND THE ENVIRONMENT, COMMITTEE ON MERCHANT MARINE AND FISHERIES
MARCH 17, 1987

No piece of federal legislation has been more significant in the field of conservation than the Endangered Species Act. The preservation of this country's biotic diversity is one of the most important issues facing the country today. As the Daird Professor of Science at Harvard, Edward O. Wilson, has noted, "The worst thing that can happen to the human race is not energy depletion, economic collapse, or conquest by a totalitarian government. The one process that will take millions of years to correct is the loss of species diversity by the destruction of natural habitat. This is the folly our descendants are least likely to forgive us."

The Nature Conservancy is a national, private, non-profit organization with over 300,000 members. Our principal objective is to identify the best and most important examples of America's ecosystem types and rare species habitats, and to provide protection for the most threatened of those natural areas and species. We are the largest private organization engaged in species conservation in the United States today. The Nature Conservancy, acting sometimes independently and sometimes in cooperation with federal, state, and local conservation agencies, has helped preserve more than 2,800,000 acres of natural lands since 1954. Included in this acreage are the habitats of 64 species of animals (244 occurrences) and 28 species of plants (41 occurrences) that are listed as threatened or endangered on the federal list, and 266 plant species (561 occurrences) under review for potential federal listing. We have also protected numerous state-listed species in virtually every state. In recent years, as a result of cutbacks in government spending, The Nature Conservancy has spent more money for acquisition of essential habitat for the preservation of endangered species than has the United States Fish and Wildlife Service.

We strongly endorse H.R. 1467 to reauthorize the Endangered Species Act for 5 years. Our concern, however, is not just that the Endangered Species Act be reauthorized. Our concern is also that Congress allocate the necessary resources so that the Act can truly accomplish its goals.

The tragedy of the Endangered Species Act is not that it is poorly written law. In our opinion the contrary is true. The Endangered Species Act as reauthorized in 1982 is a fundamentally sound piece of legislation that provides the United States Fish and Wildlife Service with the necessary legal authority to do a proper job of preserving endangered species. The potentially fatal flaw is that the Act is seriously underfunded.



THE NATURE CONSERVANCY

Listing

Identification is the first step in protection. Identification in the Endangered Species Act is found in Section IV, the Listing process. Protections of the Act cannot be afforded a species that is not listed under Section IV. If the Fish and Wildlife Service is not provided with sufficient resources to do a proper listing, they are unable to extend protections to the many species that warrant it.

Since 1973 the list of endangered and threatened species has increased by about 429 species, an average of 39 per year. Currently, however, there exist more than 1,000 additional candidate species for which the US Fish and Wildlife Service has stated that there is sufficient information to warrant proposals to add them to the list. Such proposals cannot be processed, however, because of inadequate resources. If this backlog of candidate species were to be "processed" at a rate equal to the recent historical average, it would take more than 25 years just to extend protection to those species already known to need protection now. This does not even begin to address the literally thousands of other species that are suspected to be in a threatened state. Clearly there is a desperate need for increased resources in the listing process.

The primacy of information in this process is absolute. Without that information, a listing would not be warranted. Without a listing, protection would never occur. Worse yet, with the wrong kind of information, the wrong kind of protection occurs.

The Nature Conservancy has long recognized this primacy of information as the central fact in the preservation of species. We have been working for more than ten years to establish an information base that can guide this process. We call this system a Natural Heritage Inventory Program. Natural Heritage Inventory Programs are permanent computer information systems. These programs compile data on the existence, characteristics, numbers, condition, status, location and distribution of rare or declining species and habitats and other uncommon natural features in a state or region. Since the establishment of the first Heritage program in South Carolina, The Nature Conservancy has helped to launch similar programs in 46 states. The original goal of the Heritage program continues to guide its efforts today. In order to make sound decisions about the allocation of conservation resources, the single most important need is for accurate information about the status of species and ecosystems.

The Heritage programs have demonstrated time after time their ability to provide that information. Some examples are:

- The Washington Heritage program alerted the National Park Service that its plans for a scenic viewpoint would destroy one of five known populations for golden indian paintbrush, a federal candidate plant species. The Park Service decided to modify its plan.
- The Washington Heritage program also located Howellia aquatilis, known in four sites only, in a grazing allotment within a National Wildlife Refuge. The Heritage Program worked with the

Refuge staff to develop a management plan for the area to protect the rare plant. Later the area was added to an existing Research Natural Area and fenced.

- The largest remaining population of an endangered species endemic to North Carolina, Cooley's meadowrue, was located by the North Carolina Heritage program and protected through a registry agreement with North Carolina Power and Light Company and with International Paper Company.
- The Massachusetts Department of Transportation planned to route a highway across one of the few sites of the rare Eupatorium leucolepis var. nova-angliae (white bracted boneset), Category 1 for federal protection. This site supports 60% of the world's population of the species. Heritage program staff meetings with state highway staff resulted in a realignment to minimize damage. All this was done before right-of-way was secured, land was acquired, and the final design was made.
- In Florida, the Seminole Electric Cooperative narrowed selection of sites for a coal-fired electric generating plant to two locations. The preferred location was Alum bluffs, an area adjacent to the Apalachicola River. The State Department of Environmental Regulation asked the Heritage Program to provide detailed ecological data on the site, which includes the federally listed plant Torreya taxifolia. After reviewing the biological data, the Cooperative chose another locality. When the option on Alum bluffs expired, the Conservancy acquired the site.

Heritage information frequently shows that a species is sufficiently recovered to be removed from the list or that it wasn't as rare as had been thought in the first place. For example:

- In Wyoming the Heritage Program reduced the number of federally considered species from 19 to 5, finding greatly increased numbers of many species that had been considered rare.
- In Colorado, of 25 Category 2 plant reviews, 14 were recommended for lower status as a result of Heritage Program research.
- The Arizona Heritage Program has suggested that 24 species be removed from the federal candidate list.
- In Ohio, at least 15 species believed extirpated in the state have been rediscovered in field studies conducted by the Heritage Program.

This information has resulted in recommendations that certain species be removed from federal and state lists. This obviates the need for the production of a recovery plan, acquisition of critical habitat, etc. Accurate information at the start of the process can save money and a lot of wasted effort.

These examples are not offered to point out deficiencies in the information-gathering abilities of the Fish and Wildlife Service. Quite the contrary. In many cases the Fish and Wildlife Service has contracted with the Heritage programs to obtain the necessary information. What these examples point out is the size of the job of gathering the necessary data on species. And data costs money. The Conservancy believes that the current funding levels for the listing process do not adequately address the need. In fact, there are species that have suffered potentially irreparable harm and have been brought closer to extirpation for lack of funding. These species are literally dying off while they wait for a well-deserved listing.

- The Texas henslow sparrow, for example, has apparently become extinct even as the Fish and Wildlife Service was trying to decide whether it should be listed. The Arizona agave, a desert plant, occurred in a dozen or so different sites as recently as 1980. Today this plant remains at a single site.
- In Texas, a status report on a plant (large-fruited sand veronica) was completed in May 1983 with a recommendation that the plant be added to the federal list. At the time there was only one known population. Since then, a biologist has checked the site and found no plants. While waiting for a listing, the plant has apparently become extinct.
- In Arizona, a status survey completed by the Heritage program in 1979 identified the Tarahumara frog as a species in need of special attention. At that time, there were fewer than 100 in existence. The species was recommended for listing in 1983, but lack of funding from the Fish and Wildlife Service for sufficient status work deterred the effort. Since that time, the last Tarahumara frog in Arizona has apparently disappeared.
- Finally, Thalictrum cooley (Cooley's meadowrue) -- perhaps North Carolina's most endangered plant -- has been on their waiting list to be federally listed for many years. This species has apparently been declining, though it has always been restricted in distribution due to its correlation with a rarely occurring habitat. It is now restricted to eight sites in North Carolina, which may constitute only two populations, as the sites are very close together in two clusters. Although the plant does not occur on federal land, it needs to be listed.

The Nature Conservancy believes that the current proposed budget for the listing process in the Endangered Species Act (\$3.3 million) is woefully inadequate to do the job. As we have pointed out before, it would take nearly twenty-five years from today just to process the listing packages for all of the species known to need protection. Status survey work on plants and animals, with emphasis on the States of Hawaii, California, Florida, Utah, Texas, Oregon and Alabama, is also badly needed and badly underfunded. The Conservancy believes that authorization levels should be established that would allow at least \$15 million annually for the listing process, and that a portion of those funds be directed at increasing the number of personnel involved with the listing.

State Grants

Section 6 of the Endangered Species Act provides financial assistance for a key element of successful treatment of endangered species. State grants are an integral part of the data gathering and recovery process. Section 6 grants stimulate interest and build expertise at the state level as well as increase the resources devoted to endangered species work through the state match. The goal of Section 6 is to encourage cooperative agreements between the states and the federal government to increase endangered species work. Both federally listed species and candidates are eligible.

In 1977, an early year in the state grants program, there were 21 cooperative agreements. Section 6 was appropriated \$4 million, providing almost \$200,000 per agreement.

A comparison of that year and 1987 provides a dramatic example of the desperate situation today. Currently there are 76 cooperative agreements with 46 states, Guam, Puerto Rico, and the Virgin Islands. That is nearly a four fold increase in the number of cooperative agreements. Appropriations for Section 6, however, have not increased an equivalent amount. In fact, Section 6 received \$4.3 million in Fiscal Year 1987, essentially the same amount that was appropriated ten years ago when there were only 21 cooperative agreements. The results are obvious. While Section 6 was providing \$200,000 per cooperative agreement in 1977, today it can average only \$57,000 per agreement, a woefully inadequate sum. We should, at a minimum, require an authorized level of \$15 million. The Nature Conservancy strongly supports such a level.

As it is today, five states have cooperative agreements but received no funds in 1986. The small amount of money currently available to each state makes it very difficult to carry out an effective endangered species program at the state level. In requesting Section 6 grants states have reduced their requests and have curtailed their endangered species activities because of their prior knowledge that Section 6 funds would not be available. For example, although the state of Ohio has signed cooperative agreements with the federal Office of Endangered Species, they have eliminated their requests because the time and resources needed to put together requests has not resulted in enough funds to make it worthwhile. In many states endangered species coordinators have been forced to design their requests to undertake only those projects that they know have a chance of being funded.

Funding authorizations of \$15 million in Fiscal Year 1988, rising to \$25 million in Fiscal Year 1992, are recommended to allow for funding all existing agreements and those yet to be signed as well as additional listed species and increased work on candidates. The states are willing and eager to do more, to spend more federal dollars in conjunction with their own and to make good use of them. The following examples illustrate the kinds of activities the states have already engaged in using Section 6 grants and the kinds of activities that they would put on their priority list were Section 6 money available in significantly higher amounts.

New York. Last year New York sought \$71,000 in federal assistance through Section 6. They received a total of \$19,500. Though New York has only 2 listed plant species, there is a very important species, sandplain Gerardia, which is a category 1 waiting to be listed. The package was sent to

the federal government 1 1/2 years ago. There are only five sites in New York. A recovery plan, monitoring, searching for populations and continuing status survey work needs to be done. In plants alone New York could use funds to provide a listing package for the harts tongue fern. They could also use funds for status surveys for four or five critical species as well as the recovery plan for the sandplain gerardia.

Massachusetts. Massachusetts has a very active endangered species program, partially funded through Section 6 and partially funded through the non-game wildlife fund, which is an income tax check-off. This check-off has been raising less each year, dropping from \$360,000 to \$200,000 in 1986.

Excluding whales and turtles there are six listed vertebrates in Massachusetts, the most special of which is the Plymouth red-bellied turtle which is endemic to Massachusetts. There is one federally listed plant, the small whorled pogonia. Also in residence is the largest population of the piping plover, and another shorebird, the roseate tern, which is a candidate for listing. Management needs for these shorebirds are great because they require the roping off of beaches and predator control. The red-bellied turtle has been a subject of much work by the Massachusetts endangered species program.

Massachusetts has been fairly successful in obtaining Section 6 grants. For example, for the Plymouth red-bellied turtle they received \$16,000 for a recovery plan and life history. Reptiles seem to get priority; whereas birds, in particular the bald eagle and peregrine projects which they requested funds for, have not been funded.

In planning requests, Massachusetts endangered species specialists have made sure that they work with the Fish and Wildlife Service, so that they know ahead of time what is likely to be funded. They feel that dramatically increased funds could be legitimately spent in Massachusetts. Particularly, the North Atlantic right whale deserves significantly increased spending. There are only 300 right whales in the Atlantic Ocean. Massachusetts and Georgia have made the right whale the official state marine mammal. The Massachusetts legislature declared a whale awareness day. Already, \$50,000 from the state's general fund has been appointed for research on the right whale, with potential for \$250,000 more this year. A recovery plan, still unwritten by National Marine Fisheries Service (NMFS), is predicted to be very expensive because it would require highly developed technology, ship-board observation, airborne survey work, and even satellite radio telemetry. However, as much as a million per year could be spent on the right whale.

Priorities in Massachusetts for future work include expanded research on bald eagles, site checking on peregrines, and more management of the Plymouth red-bellied turtle and the short-nosed sturgeon which is found in the Merrimack River. A great deal more study is required for the Atlantic ridleys turtle, and piping plover recovery would mean acquisition of critical habitat. Research on roseate terns at Cape Code and research for other colonies on the coast would be done if funds were available.

Arkansas. Arkansas has received a small portion of those funds which they have requested for Fiscal Year 1986 and Fiscal Year 1987. For example, for plants in 1986 they requested \$37,000 and received only \$10,000. In 1987 they requested \$31,000 and received only \$5,000. Their estimate of need for Fiscal Year 1988 is approximately \$92,000.

California. After seeking Section 6 funding of \$900,000 in Fiscal Year 1986, the State of California received approximately \$350,000, an insufficient sum to manage 26 federally listed species, 2 proposed species, 250 category 1 species and 400 category 2 species. Only about 7 plant species have complete recovery plans; all the rest need recovery plans or survey management plans. Furthermore, at approximately \$15,000 per recovery plan, a recovery budget of over \$300,000 is necessary. An estimated 200 species are in need of status surveys.

Texas. Texas is one of the few states that does not yet have a signed cooperative agreement. Because signing both plant and animal agreements is imminent, and because the state has invested some of its own resources in endangered species work, planning for Section 6 activities has taken place. The Texas Heritage program has estimated that they could put to good use some \$216,000 for plants and \$360,000 for animals. Their first request of approximately \$32,500 for 10 projects reflects the scaled down expectations of states not yet on the funding list at all.

These examples demonstrate that Section 6 should be authorized at a significantly higher level; we recommend \$15 million. We realize the difficulty of actually raising appropriation levels, and for this reason we mention favorably the idea of establishing a secure, predictable funding source, earmarked exclusively for state grants. The success of the Pittman-Robertson, Dingell-Johnson and Wallop-Breaux programs has lead some to suggest similar revenue raising schemes for Section 6, such as duties on certain imported products, penalties recovered under various environmental laws, or excise taxes on certain products. We support examination and pursual of such funding solutions.

United States Forest Service and the Bureau of Land Management

There are currently 129 listed species on National Forest Service land, 12 proposed for listing, 81 category 1 species and 539 category 2 species. On Bureau of Land Management lands there are 127 listed species and 790 candidate species. Under the Endangered Species Act, these agencies are under an obligation to ensure protection of listed species. However, both agencies suffer from a lack of resources to sufficiently carry out this responsibility.

Even though 79 Recovery plans have been approved for species on Forest Service lands, only high priority plans have been fully implemented. Examples would be the grizzly bear, Kirkland's warbler, Puerto Rican parrot, bald eagle and the woodland caribou. Overall, approximately 50% of the recovery plans are partially implemented. While BLM has written 73 recovery plans, implementation has begun on only 56, and none of them are fully implemented.

The problem, again, is resources. The Forest Service's Threatened and Endangered Species allocation is only \$3.6 million and BLM's budget for endangered species work is approximately \$4 million. The Nature Conservancy recommends that authorization levels be sufficient to ensure that at least \$5 million be available to each agency annually to carry out its obligations under the Act.

Further, we commend the Forest Service and the Bureau of Land Management for their designation of Research Natural Areas (RNA's) and Areas of Critical Environmental Concern (ACEC's). The Forest Service has established more than 150 RNA's and the Bureau of Land Management currently manages 245 ACEC's, totaling over 3,000,000 acres. Making use of these designations in the planning process has proved to be a valuable tool in managing for endangered species protection. We urge the continued use of the RNA and ACEC designations. Moreover, we urge more extensive use of these designations when the protection of critical sites merits such protection.

Other Resource Needs

The other components of the Endangered Species Act -- recovery, international work, law enforcement -- are all integral parts of the whole Act. Each component must function at its maximum capacity to truly protect endangered species. The Nature Conservancy's expertise lies primarily in the data-gathering aspect of the Act, and we have addressed that specifically. Many other concerned parties will present testimony to this Committee on the compelling need for more resources throughout all the functions of the Act. The Nature Conservancy heartily endorses an authorization level that would allow appropriations of at least \$65 million for all functions of the Act, reiterating our specific recommendations that \$15 million be devoted to listing, \$15 million to Section 6 and \$5 million each to the Forest Service and the Bureau of Land Management.

Proposed Amendments

The Nature Conservancy supports an amendment addressing the backlog of species that have formally been identified by the Fish and Wildlife Service as candidates for listing but which, because of the limited resources available to the Act, do not receive much needed protection. The Nature Conservancy's Heritage Programs have provided several examples of how such species decline, some to the point of extinction, while waiting for this protection. In order to alleviate this problem, the Conservancy supports an amendment to treat candidate species as "proposed" species under Section 7(a)(4) of the Act. This would require federal agencies to confer with the Secretary about any action on their part that may adversely affect the species. This process is less rigid than the Section 7 consultation process, but will provide a small measure of needed protection for these candidate species.

Seabeach amaranth (*Amaranthus pumilus*) is an example of a plant that needs the protection of the Endangered Species Act. Only 20 populations of this plant exist today--all in North and South Carolina. It has been extirpated from more than half its historic range: it can no longer be found on the coast of Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland and Virginia. Many of the Carolina sites are on public land, but this does not translate to adequate protection. In addition to development of barrier islands, serious threats to seabeach amaranth come from indiscriminate ORV use on beaches. Management policy regarding ORV use on the public beach sites is desperately needed. The species is still ranked Category 2 (U.S. Fish and Wildlife Service), and thus it would benefit now from the "candidate amendment."

Howellia aquatilis is a species for which there is very good evidence showing a decline in range and total abundance. It is an aquatic annual which grows in ponds, glacial potholes, and oxbows in areas which are hydrologically very complex. The species is currently in Category 2; if such taxa were given more protection, Howellia aquatilis would directly benefit. In the Swan Valley in western Montana, two areas where the plant occurs, are directly threatened by logging of surrounding forests on U.S. Forest Service lands. In addition, development which is impacting the wetlands in one major area of occurrence is being carried out under permit from the U.S. Army Corp of Engineers. The "Category 2" status of this plant prevents any strong recommendations to these agencies. Often, we can only hope that they will consider such a species in their management plans "out of the goodness of their hearts." A species which is as threatened as Howellia aquatilis needs more protection than that.

The Nature Conservancy also supports an amendment to correct an inequity in the Act. Currently, plants do not receive the same treatment and protection on non-federal lands that animals do. Individuals can destroy, uproot or take plants from lands in private or state ownership. We support an amendment that would change Section 9(a)(2) of the Act to prohibit the collection, vandalism, or taking of protected plant species on private lands.

For example, smooth coneflower (Echinacea laevigata) is a southeastern endemic that would greatly benefit from both the listing (less than 20 populations have been found over its entire range) and an amendment prohibiting collection, etc., on non-federal lands. All species of the genus Echinacea are collected and traded/sold in the horticultural market.

Lastly, TNC supports cooperative efforts to resolve conflicts between the protection of endangered species and the development of water resources, like the recovery program for endangered fish in the Upper Colorado River Basin described in the testimony of the Colorado Congress. We join the Water Congress in supporting the continued funding of development of the Upper Colorado River Basin recovery program, in supporting the appropriation of \$10 million for the acquisition of water rights to protect instream habitat under the program, in seeking a report to Congress no later than March 1, 1988 on the progress under the program, and in asking that the program be implemented consistent with state water rights systems and interstate compact entitlements. Our support for such cooperation, however, should not be taken as an endorsement of the 2 year reauthorization or of the other proposals advocated by the Water Congress. In particular, we strongly endorse a 5 year reauthorization, and we believe that such a reauthorization is the appropriate framework for cooperative efforts like the Upper Colorado River Basin recovery program. We also believe that such cooperation can be achieved without amending the Endangered Species Act.



THE WILDLIFE SOCIETY

5410 Grosvenor Lane • Bethesda, MD 20814 • Tel. (301) 897-9770

The Honorable Gerry E. Studds
 Chairman, Subcommittee on Fisheries and
 Wildlife Conservation and the Environment
 H2-544 House Office Bldg. Annex II
 Washington, D.C. 20515

Dear Chairman Studds,

The Wildlife Society appreciates the opportunity to present our position supporting the reauthorization of the Endangered Species Act of 1973. The Wildlife Society is the international association of wildlife professionals working at all levels in the public and private sectors to promote the wise stewardship of our natural resources. Moreover, many of our members work directly with endangered species and are professionally concerned about the tremendous need for reauthorizing the Endangered Species Act. Properly funded, the Endangered Species Act in its present form can continue to be an important and effective tool that permits sound development to proceed and minimizes loss of our wildlife resources. The Act provides a functional mechanism by which people can work together to protect and return endangered species to viable population levels. Therefore, The Wildlife Society urges the reauthorization of the Endangered Species Act of 1973 without amendments, and offers the following comments on several pertinent reauthorization issues.

The act is well written and comprehensive, but its effectiveness always has been hindered by inadequate funding. In light of the current federal deficit, The Wildlife Society can accept the funding ceilings proposed in HR 1467. However, further lowering of the appropriations ceiling would be unacceptable for such an important program that is currently underfunded.

The initial step in protecting a species is recognition of its threatened or endangered status. However, the listing program has been behind schedule since its inception, and instead of catching up, the backlog has grown. To process candidate species in a timely and efficient manner, Fish and Wildlife Service staff have been forced to consider only top priority candidates and even then may require time extensions before a species actually is listed. While the listing staff may be granted time extensions from the Secretary, some species may face greater jeopardy. The Texas Henslows's sparrow was extinct by the time it was listed. The cost of inadequate funding is not just limited to loss of species, but extends to increasing the recovery costs for those taxa that are listed. By delaying

Chairman Studds

30 March 1987

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recovery plans, we may forego existing opportunities to mitigate declines and be forced to proceed with expensive, last resort efforts to attempt recovery with reduced probabilities of success. By increasing staff and funding levels, species' status can be determined earlier so recovery plans can be initiated promptly before undue population declines occur.

Through interagency consultations, the Endangered Species Act provides adequate flexibility to protect endangered species without inappropriately halting economic developments. As former Fish and Wildlife Service Director Jantzen testified to this committee during the last reauthorization attempt, federal agencies are becoming accustomed to section 7 procedures, with informal consultations increasing 40% since 1979. While formal consultations decreased over 70% during the same period, they now are increasing slowly as new species are listed and the number of new development projects grow. According to the FY 1988 U.S. Fish and Wildlife Service budget, there were 420 formal consultations conducted in 1986 with 460 expected in 1987 and 510 expected to occur in 1988. The trend in the current administration budget, however, is the opposite; less and less funds for the consultation process. The smooth operation of the endangered species program is contingent on the ability of federal agencies to resolve conflicts through consultation. Decreased funding when increased resources are needed only will lead to hastily made decisions and more, rather than fewer, conflicts. It is in everyone's interest to support a well funded consultation process capable of designing solutions that obviate the costly and time consuming legal battles exemplified by the Tellico Dam controversy.

Since the passage of the Endangered Species Act, Congress has charged the Fish and Wildlife Service with the responsibility of managing the endangered species program and sharing the cost of needed cooperative agreements. It is particularly important to recognize that financial assistance to the states is a federal responsibility and that it is essential to the success of recovery programs. States are not able to bear the full cost of well designed endangered species programs. As Fish and Wildlife Service Director Dunkle stated, "...the complex and often difficult task of recovering endangered species is one that is too large for any single agency." It is imperative that the Federal government take a more active role in cooperative recovery programs if listed species are to return to viable population levels.

The Wildlife Society believes passage of HR 1467 with its proposed appropriation levels will help increase the effectiveness of the Endangered Species program.

There are concerns by some who feel that the Act in its present form unduly impedes water development and interferes with state-granted water rights. However, The Wildlife Society can not support any amendment altering the Act. Already the Act states that Federal agencies shall cooperate to resolve water resource

Chairman Studds

30 March 1987

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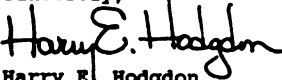
issues and provides a mechanism specifically developed by Congress to resolve conflicts fairly through section 7. The Wildlife Society believes the Endangered Species Act has sufficient flexibility to prevent undue impediments to development. The Act should not be amended to accommodate individual projects whose proponents are unable to accept a negative ruling. The Wildlife Society believes strongly that section 7 conflicts should be resolved within the existing framework of the Act.

The extent to which threatened and endangered species may be taken, such as the grizzly bear and wolf, is another topic of discussion. The Eighth Circuit Court of Appeals upheld a lower court ruling that a sport trapping season for a Minnesota wolf population was not permissible at this time. The Wildlife Society believes strongly that professional biologists charged with the recovery of threatened and endangered species should have a broad range of management options available to adequately handle problems inherent with predatory species. Amendments to address regulated taking of threatened and endangered species are needed but the Society will not impede the timely reauthorization of HR 1467 by requesting such amendments at this time.

In conclusion, the Endangered Species Act has been successful using limited resources to promote the conservation of endangered and threatened species. The Act has been confronted by several challenges since its original authorization and has continued to be an extremely important piece of legislation. It is essential that the Endangered Species Act be reauthorized and funded to provide protection and recovery efforts for threatened and endangered species.

Thank you for considering the views of The Wildlife Society regarding the Endangered Species Act. Please include this statement in the official hearing record.

Sincerely,


Harry E. Hodgdon
Executive Director

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Natural Resources
Defense Council

1150 New York Ave. NW
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March 19, 1987

The Honorable Gerry E. Studds
Chairman, Subcommittee on Fish and Wildlife
Room 543 House Annex 2
U.S. House of Representatives
Washington, D.C. 20515

Dear Representative Studds:

The Natural Resources Defense Council asks that this letter be included in the record of the Subcommittee on Fish and Wildlife's hearing on reauthorization of the Endangered Species Act. The material contained herein supplements testimony presented by the Environmental Defense Fund and Defenders of Wildlife in support of amending the Act to restrict collecting of endangered plants growing on lands not under federal jurisdiction.

Certain types of plants are eagerly sought by collectors for use in horticulture. These include cacti, other succulents, orchids, and carnivorous plants. Unfortunately, rarity is one factor which stimulates connoisseurs' acquisitive instincts; therefore, endangered species, both before and after their formal listing under the Act, are particularly prized. Even where they are available, propagated plants may not satisfy some people because they may not be true to type, may be of questionable genetic purity, or simply may be "unrealistic". The rarity factor means that even relatively unattractive types of plants may be collected.

Since collecting of endangered plants from non-federal lands is currently legal, occurrences are poorly documented. Nevertheless, some disturbing instances have been verified.

In 1984, the extremely rare Virginia round-leaf birch, Betula uber, suffered a dramatic setback at the hands of mankind. This tree had only thirty seedlings at the beginning of that spring, all on private land. Eighteen of these shortly disappeared, apparently due to collecting or vandalism. While the Virginia round-leaf birch is not a particularly attractive species, it is sought because of its rarity; at least one nursery is offering what are said to be propagated plants.

The green pitcher plant, Sarracenia oreophila, was listed as

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endangered in 1979. It is one of the rarest carnivorous plants in the world and highly sought-after by the specialist collector. In 1981, several plants were taken from one bog in Alabama. In 1984, a man from Florida travelled to Alabama to collect plants, returned to Florida and mailed specimens of the wild-collected plants to several people in other states. Fish and Wildlife Service law enforcement officials were not certain whether these actions violated the prohibition on "interstate commerce" in endangered plants currently in the Act.

In 1986, another 22 plants of the green pitcher plant were taken from private land. This collection was described by FWS Regional Director James W. Pulliam, Jr., as involving "a rather large percentage of plants from one of the better colonies..." and as having "significant adverse effects on our ongoing recovery efforts for this endangered species ... "

Also in 1986 all plants in a small population of the woodland orchid, the small whorled pogonia (Isotria medeoloides) were dug up from a site in New Hampshire.

In addition to these examples of actual collecting, we can document a potential threat for many species of listed plants. In 1982, a cactus dealer sent a letter to his best customers, offering to collect and ship 19 rare cactus species, including 7 listed under the Act as endangered or threatened. He said: "As you may know most of the plants on this list are very rare and quite a few are on the indangered (sic) species list. The names of these plants will have to be changed to be shipped overseas ... This list is only being sent to a select few of my best customers, so please treat it most confidential. Thank you ..."

Since the dealer was clearly engaged in interstate and foreign commerce, his very offer to sell the plants was a violation of the Act. Nevertheless, the case illustrates the continuing demand for listed plant species of certain types.

Collecting of proposed or candidate species can also be documented. These cases again illustrate the demand. Since collecting remains legal, and no case has ever been tried against an alleged violation of the prohibition on interstate commerce, NRDC believes that collecting of these species probably continues after they have been listed.

Pediocactus knowltonii. This tiny cactus, one of the first to be listed as endangered, is a collectors' item because of its diminutive size and large flowers. Between 1965 and 1981, its population was reduced from about 5,000 to 1,500 by flooding by a dam and commercial collecting of many of the remaining plants. The landowner was unable to prevent people from entering his land

for this purpose. FWS botanists contend that only because collectors believe that the population is too depleted to reward a collecting trip have they not disturbed the area in recent years. The land has recently been acquired by the Nature Conservancy, but it remains vulnerable to collectors because it still remains without legal protection.

Two Florida cactus of the Cereus genus face threats from private collecting and vandalism with guns and machetes. Cereus robinii, the Key tree-cactus, is a listed endangered species found on the Florida Keys and in Cuba. The Florida population is on both private and public lands. About ten years ago, a nursery reduced populations of several Cereus species, including C. robinii, from one isolated grove on the key. Cereus eriophorus var. fragrans, the fragrant wooly cactus, is also listed as endangered. The population is limited to 40-50 plants on private lands adjacent to a state park. Authorities suspect that plants were collected in 1984.

Rhododendron chapmanii, the Chapman's rhododendron, is one of the loveliest of the native rhododendrons with brilliant pink blossoms. Listed as endangered, it is native to the pinelands of Florida. Before the listing, one of only four known populations was totally eliminated when its location was discovered by collectors. The fact that propagated plants are offered for sale is evidence of a continuing interest in this species.

Even the less beautiful or conspicuous species are subject to collecting. Acanthomintha obovata ssp. dyttonii, the San Mateo thornmint, is a small herb with a remaining population of only 2,000 to 3,000 plants located in a county park. In 1983, several large chunks of turf, including soil, were removed by one or more collectors.

The potential for collecting threatens a significant proportion of listed species. Indeed, of the 155 species of plants now listed, at least one-fifth were listed primarily because of substantial threats from commercial or non-commercial collecting. Among these are 23 cactus, Agave arizonica, Dudleya trackiae, Rhododendron chapmanii, Trillium persiciens, Sarracenia greophila, and several others.

In 1986, NRDC surveyed catalogs of 46 nurseries selling North American wildflowers. We found many selling coneflowers, including 5 nurseries selling propagated specimens of the Tennessee purple coneflower, Echinacea tennesseensis, an endangered species. Genera containing listed or candidate species, such as goldenrods (Solidago), Trillium, trout lilies (Erythronium), and Penstemon, are widely represented in these catalogs.

Clearly, collecting poses a threat to a wide variety of endangered plant species. The amendment we support would help reduce this threat by enabling federal law enforcement authorities to investigate and prosecute those who remove such plants from their habitat without permission of the landowner or conservation authorities.

Thank you for considering our views. We look forward to working with you to ensure reauthorization of a stronger Endangered Species Act.

Sincerely,

A handwritten signature in cursive script that reads "Faith Thompson Campbell". The signature is written in dark ink and is positioned above the printed name.

Faith Thompson Campbell, Ph.D.

MAR 20 1987



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICE AT COLEBRAY PARK, WHEELING, WV 26061-1000 (204) 242-7100

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The Honorable Gerry Studds
Chairman
Subcommittee on Fisheries, Wildlife
Conservation and the Environment
House Annex II, Room 540
Washington, D.C. 20515

Dear Chairman Studds:

The American Association of Zoological Parks and Aquariums submits this letter for the record on the reauthorization of the Endangered Species Act (ESA). The AAZPA is the largest professional zoological park and aquarium organization in the world. AAZPA represents virtually every major zoological park, aquarium, wildlife park and oceanarium on the North American continent and the vast majority of the professional staff members employed therein. Collectively, zoos and aquariums in this country annually play host to more than 100 million visitors.

The goals and objectives of AAZPA are "to provide education, recreation and cultural enjoyment through the exhibition, conservation and preservation of the earth's fauna". The purposes of the ESA are to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and to provide a program of the conservation of such species." We believe that the goals and objectives of AAZPA are supportive of and complementary to those of the ESA.

AAZPA plays an active role in the conservation and preservation of wildlife. Our Species Survival Plan strengthens and coordinates zoo breeding programs so that they can help in the worldwide effort to preserve vanishing species. The Plan seeks to (1) reinforce natural populations which have been reduced by human activities, disease or catastrophe; (2) provide animals for repopulation of original habitat when practicable; (3) serve as refuge for species destined for extinction in nature; (4) maintain repositories of germ plasma and; (5) conduct research and develop animal husbandry techniques to support both captive and wild populations.

Most of our member institutions have excellent educational programs which provide information on the plight of the growing number of endangered species with which we share this planet. Because of this, our members provide an important service to the general public

A nonprofit, non-sectarian organization dedicated to the advancement of zoological parks and aquariums for conservation, education, scientific studies and recreation

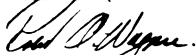
in behalf of wildlife. We believe that animals displayed in a proper environment in captivity can act as ambassadors for their wild counterparts. This is especially true if the enclosure is arranged in a manner to reflect at least a portion of the animals' wild habitat and is supported by carefully selected educational materials. We accept the responsibility that is ours in providing sanctuaries for some of the world's most endangered and threatened species.

AAZPA supports the reauthorization of the Endangered Species Act without weakening amendments. There is already a burgeoning illegal trade in live wildlife and we support every effort to end that. We also propose additional funding to enable full implementation of the Act.

Thank you for the opportunity to submit these comments for the record.

Most Sincerely,

AMERICAN ASSOCIATION OF ZOOLOGICAL
PARKS AND AQUARIUMS



Robert O. Wagner
Executive Director

cc: Board of Directors



Wildlife Management Institute

Suite 725, 1101 14th Street, N.W., Washington, D.C. 20005 • 202/371-1808

March 17, 1987

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Honorable Gerry E. Studts, Chairman
Subcommittee on Wildlife Conservation and the Environment
Committee on Merchant Marine and Fisheries
House Office Building
Washington, D.C. 20515

Dear Chairman Studts:

The Institute supports enactment of H.R. 1467 to reauthorize appropriations for the Endangered Species Act through fiscal year 1992. We believe that the bill would provide for needed levels of funding to maintain viable programs at the federal level and to support state efforts.

In addition to reauthorization, we urge the subcommittee to consider amendments to neutralize recent court decisions affecting proper management of endangered and threatened species.

On February 19, 1985, the U.S. Eighth Circuit Court of Appeals prohibited the Interior Department and the Minnesota Department of Natural Resources from implementing a management plan for wolves in the northern part of that state. The plan called for trapping excess wolves in certain areas to control livestock depredation and relieve further concerns of landowners and other residents bordering the wolf's range. Although the Endangered Species Act supposedly gives the Interior Secretary authority to allow such limited taking of a threatened species, the Court ruled otherwise.

For the Act to retain its credibility with a large part of the public, federal and state wildlife agencies must have adequate authority to realistically manage species such as wolves, grizzlies, alligators and others that can cause considerable problems. Without such authority, agencies quickly lose public support for restoring the endangered populations. We suggest, therefore, that the Subcommittee seriously consider an amendment to the Act to overcome this apparent misinterpretation of the law by the Eighth Circuit.

Another U.S. Eighth Circuit Court of Appeals decision in early January of 1985 states that Indians may kill endangered species and any other wildlife they choose on reservation lands. This ruling is a clear signal that the Endangered Species Act is inadequate.

By a 5-3 vote, the appeals court said that certain Indians have treaty rights to hunt on reservations as they please. This, the court said, includes the right to kill endangered species or any other form of wildlife. However, the court said, Indians do not have the right to sell any parts of the animals.

DEDICATED TO WILDLIFE SINCE 1911

Honorable Gerry E. Studds

-2-

March 17, 1987

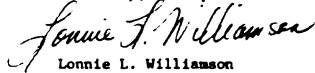
And the Court indicated that the only way to stop Indians from killing endangered species or other wildlife at will is to amend the applicable treaties to that effect.

The outdated treaties that this country signed with various Indian tribes years ago have become a serious threat to fish and wildlife resources in many parts of the nation. The subcommittee, I am sure, is well aware of the problem. Although it surely is a sensitive area to broach, something must be done. And we believe that protection of endangered species from these treaties is a good place to start. Therefore, we recommend that the Subcommittee consider an amendment to the Act that would allow state and federal wildlife agencies to prohibit Indians from taking endangered or threatened species.

Mr. Chairman, these two court decisions not only restrict managers' ability to conserve endangered species, they breed contempt for the law among the general populous that under reasonable circumstances would support it. We hope that the subcommittee will help solve these issues. And we would appreciate this letter being included in the hearing record on H.R. 1467.

Thank you.

Sincerely,



Lonnie L. Williamson
Secretary/Treasurer

LLW:bsg

IN THE
Supreme Court of the United States
 OCTOBER TERM, 1985

UNITED STATES OF AMERICA, *Petitioner*

v.

DWIGHT DION, SR., *Respondent*

On Writ of Certiorari to the United States
 Court of Appeals for the Eighth Circuit

BRIEF ON THE MERITS OF AMICUS CURIAE
 INTERNATIONAL ASSOCIATION OF
 FISH AND WILDLIFE AGENCIES

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IN THE
Supreme Court of the United States
 OCTOBER TERM, 1985

—
 No. 85-246
 —

UNITED STATES OF AMERICA, *Petitioner*

v.

DWIGHT DION, SR., *Respondent*

—
Brief of Amicus Curiae
International Association of
Fish and Wildlife Agencies
 —

The International Association of Fish and Wildlife Agencies, having obtained and filed written consent of all parties to the case as required by paragraph 2 of Rule 36, submits this brief in support of the position of petitioner United States of America.

INTEREST OF AMICUS CURIAE

The International Association of Fish and Wildlife Agencies (hereinafter "the International Association") is a quasi-governmental organization of public agencies engaged in protection and management of the

rials in their makeup from thermoregulatory systems to biodynamic compounds, that enable them to survive in particular environments.¹

The Desert pupfish, apparently confined to a few waterholes in California and Nevada, can tolerate temperatures as low as 1°C and as high as 42°C while surviving in water with a salt content of 70 parts per 1000, twice the salinity of seawater. A 1977 National Science Foundation study reported:

The extreme conditions of the pupfish habitats tell us something about the creature's extraordinary kidney function and thermoregulatory sys-

¹Related is the awareness that complex and diverse ecosystems are more stable and possess greater compensatory resources to resist invasion from foreign sources than simple systems with a few dominant species. The risks associated with genetic vulnerability in the area of major crops have led to establishment by the Department of Agriculture of the national plant germplasm system at Ft. Collins, Colorado, to meet national needs for plant genetic resources. See U.S. General Accounting Office, Better Collection and Maintenance Procedures Needed To Help Protect Agriculture's Germplasm Resources, CEO-82-7 (1981). Crops become genetically vulnerable because of the uniformity demanded by society. The market demands an inexpensive and uniform product—uniform as to size, shape, maturity date and the like—and rewards the farmer and the plant breeder who can produce it. Uniformity of product means uniformity in the genetics of the crop and if the genes of this uniformity happen to make the crop susceptible to disease, an epidemic is in the making. National Academy of Sciences, Genetic Vulnerability of Major Crops, 15, 29 (1972) (hereinafter "NAS Study"). According to the National Academy of Sciences, there are fifty varieties of peas but 96 percent of the 1969 pea crop in the United States was planted to only two such varieties. NAS Study, 286-287. The National Academy concluded that "most major crops are impressively uniform genetically and impressively vulnerable." NAS Study, 1.

fish and wildlife of North America. Founded at Yellowstone National Park in 1902, government members of the International Association include the fish and wildlife agencies of all fifty states and eight Canadian provinces as well as the federal and dominion fish and wildlife services of the United States and Canada. Since its founding the International Association has been a key instrumentality in promoting principles of sound resource management and in strengthening federal-state cooperation in the protection and management of fish and wildlife. It files this brief urging reversal of the decision of the Eighth Circuit that the prohibitions of the Endangered Species Act and of the Bald Eagle Protection Act are not applicable to on-reservation taking of protected species for personal consumption by Indians possessing a treaty right to hunt and fish.

States have a substantial interest in the fish and wildlife found within their borders, and the protection of this interest is a matter of public concern to the whole people of the state. *Illinois Central R. Co. v. Illinois*, 146 U.S. 397, 455 (1892). In the United States the final responsibility for preservation of fish and wildlife resides in the states. Whereas the police power of the state in respect of fish and wildlife was originally viewed as flowing from the duty of the state to preserve for its people a valuable food supply, *Geer v. Connecticut*, 161 U.S. 519, 534-535 (1896), the preservation of all life forms is now viewed as being of ecological and scientific value as well. Along with the knowledge that hundreds of wildlife species have been lost to the progress of modern civilization comes the increasing awareness that each species possesses a distinctive collection of genes, the hereditary mate-

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Any reduction in natural resource stocks represented by species reduces opportunities for scientific advancement and, in consequence, a diversity of life forms may well rank among a state's most important natural resources. Once a species is lost, its reservoir of genetic characteristics cannot be replaced or reproduced artificially. This awareness has resulted in enactment of state laws for the protection of species of fish and wildlife naturally occurring within their borders which are threatened with extinction. By 1973, the year Congress enacted a comprehensive endangered species program, 35 states had established protective laws for endangered species.¹ Typical of the basis for current state legislation is the declaration of policy in the Florida statute:

The Legislature recognizes that the State of Florida harbors a wide diversity of fish and wildlife and that it is the policy of this state to conserve and wisely manage these resources, with particular attention to those species defined by the Game and Fresh Water Fish Commission, the Department of Natural Resources, or the U.S. Department of the Interior, or successor agen-

¹During Senate debate on S.1983, 93d Cong., (1973), eventually enacted as the Endangered Species Act of 1973, Senator Tunney, floor manager of the bill, observed: "Presently, 35 States provide protection for endangered species. In most of these States, their laws are as strong or stronger than the provisions of this bill. In the others there are strong management programs. Only 16 States do not now provide some protection for endangered species." A Legislative History of the Endangered Species Act of 1973, As Amended In 1976, 1977, 1978, 1979 and 1980, 97th Cong., 2d Sess., Senate Committee on Environment and Public Works 385 (Comm. Print 1982) (hereinafter cited as "Legislative History").

4

tem. . . . They can serve as useful biological models for future research on the workings of the kidney in humans, and on the prospects for human survival in seemingly hostile environments—and man, in the opinion of many ecologists, will need all the help he can get in understanding and adapting to arid areas that are expanding around the earth.

N. Myers, *A Wealth of Wild Species* 116 (1983) (hereinafter "Myers"), citing National Science Foundation, *The Desert Pupfish and Human Kidney Research*, Mosaic, January/February 1977. The highly developed heart and circulatory system of the albatross permits it to accomplish an immense annual migration. Studies of the albatross have advanced understanding of cardiomyopathy, a failure in humans caused by overdevelopment of the heart muscle which obstructs blood outflow.²

The endangered Florida manatee, long protected by the state,³ possesses blood with poor clotting capability, a trait useful in hemophilia research.⁴ From a standing start the cheetah can accelerate to 70 km. per hour in a few strides and is able to maintain a 100 km. per hour chase for several hundred meters. Study of the cheetah's efficient heart and its finely tuned respiratory and circulatory systems may assist the treatment of heart disease, blood pressure, and circulatory disorders in humans.⁵

²Myers, at 6.

³Florida Manatee Sanctuary Act, § 870.12, Fla. Stat. (1983).

⁴Myers, at 123.

⁵Myers, at 170-171.

replaces it—it would simply be gone. Irretrievably. Forever.

H.Rep. No. 412, 98d Cong., 1st Sess. 4 (1978), reprinted in, *Legislative History*, at 143.

The Endangered Species Act provides for a coordinated federal-state approach to the conservation of endangered species, those in danger of extinction throughout all or a significant portion of their range, and threatened species, those likely to become endangered within the foreseeable future throughout all or a significant portion of their range. 16 U.S.C. §§ 1532(6), (20). Section 4(c) of the Act directs the Secretary of the Interior to publish lists of species determined by him to be endangered or threatened, 16 U.S.C. § 1533(c)(1), and the Secretary's determination must be made on the basis of the best scientific and commercial data available to him. 16 U.S.C. § 1533(b)(1)(A).

Section 6 of the Act directs the Secretary of the Interior to cooperate with the States to the maximum extent practicable in carrying out the endangered species program, and further directs the Secretary to enter into cooperative agreements with any state that maintains an "adequate and active" program for the conservation of endangered and threatened species. 16 U.S.C. §§ 1535(a), (c). An essential predicate to an adequate and active state program is a finding by the Secretary that the state wildlife agency possesses authority to conserve resident species of fish or wildlife determined "by the state agency or the Secretary" to be endangered or threatened. 16 U.S.C. § 1535(c)(1)(A). In consequence of this tightly woven federal-state scheme, the Secretary maintains lists of

cies, as being endangered or threatened. As Florida has more endangered and threatened species than any other continental state, it is the intent of the Legislature to provide for research and management to conserve and protect these species as a natural resource.

Florida Endangered and Threatened Species Act of 1977, § 872.072, Fla. Stat. (1983). At the federal level these same concerns culminated in enactment of the Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1543, characterized by this Court as "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978). Capturing the concerns expressed in the legislative hearings of 1972 and 1973, the House Report stated:

From all evidence available to us, it appears that the pace of disappearance of species is accelerating. As we homogenize the habitats in which these plants and animals evolved, and as we increase the pressure for products that they are in a position to supply (usually unwillingly) we threaten their—and our own —genetic heritage.

The value of this genetic heritage is, quite literally, incalculable. The blue whale evolved over a long period of time and the combination of factors in its background has produced a certain code, found in its genes, which enables it to reproduce itself, rather than reproducing sperm whales, dolphins, or goldfish. If the blue whale, the largest animal in the history of this world, were to disappear, it would not be possible to

fish and wildlife species endangered or threatened throughout all or significant portions of their range and the states maintain lists of species endangered or threatened statewide. Forty states, including South Dakota, now have cooperative agreements with the Secretary under section 6 of the Act.

The Eighth Circuit in the instant case held that the prohibitions of the Endangered Species Act, 16 U.S.C. § 1538(a)(1)(B), and of the Bald Eagle Protection Act, 16 U.S.C. § 668(a), are not applicable to the taking on the Yankton Sioux Reservation of bald eagles and other protected birds by respondent, an enrolled member of the Yankton Sioux tribe. The court of appeals found that respondent Dion possessed a treaty right to hunt eagles on the reservation for personal use and that, unless Congress expressly abrogated Indian hunting rights, the prohibitions of the Endangered Species Act and the Bald Eagle Protection Act are not applicable to respondent for acts committed on the reservation. Because it could not find such an express reference in the statutory language or the legislative history of either statute, the Eighth Circuit vacated respondent's convictions for violations of the statutory prohibitions.

In the view of Amicus International Association, the court below was mistaken in its reading of congressional intent. We believe further that the court of appeals invaded the legislative province in requiring that Congress reflect its intention in the particular manner designated by the court. The essence of endangered species protection is that certain fish and wildlife have become so depleted that the species itself is threatened with extinction. In such circumstances, each remaining individual must be accorded special

protection and taking must be prohibited. Congress in the Endangered Species Act of 1973 plainly intended that the nation's best efforts be engaged to reverse the loss of wildlife species.

The Eighth Circuit's technical reading defeats congressional intent to protect, except in certain narrowly limited and controlled situations, all individuals of an endangered species. Almost any taking of endangered species, and certainly unregulated taking, jeopardizes federal and state recovery efforts. In some instances the taking of even one or two individuals per year could lead to extinction of a species from a state. Moreover, a decision like that in the instant case has ramifications beyond the area of recognized immunity by undermining detection of illegal carcasses and parts in states where Indian reservations can be claimed as the point of origin and where take for commercial purposes can be claimed to be take for personal use.

Numerous species of fish and wildlife listed by the Secretary and/or by the States as endangered or threatened occur on the more than 50 million acres of Indian land in the United States.⁷ As of January 3, 1983, a total of 263 Indian reservations in the United States was established pursuant to treaties, executive orders, acts of Congress, Secretarial orders, and court decisions. In the examples which follow, each of the species listed ranges on and off reservation lands or waters onto surrounding lands or waters. For each of the species listed below the percentage of its habitat within the state represented by

⁷Bureau of Indian Affairs, U.S. Department of The Interior, Annual Report of Indian Lands 3 (1981).

reservation lands or waters is set forth where estimates can be made.⁹

Arizona. In Arizona, Indian lands total 19.9 million acres or approximately a quarter of the total area of the state.¹⁰ The following species listed by the Secretary as endangered or threatened occur on these lands: Brown pelican (Endangered, 5% habitat on reservation); Wood stork (End., 20%); Aleutian Canada goose (End., 60%); Bald eagle, breeding population (End., 20%); Bald eagle, wintering population (End., 30%); Yuma clapper rail (End., 16%); Sonoran pronghorn (End., 5%); Gila topminnow (End., 10%); and Apache trout (Threatened, 80%). Except for the first two species listed, each of these species uses reservation habitat during its breeding season thereby making such habitat particularly important to survival of the species in the state.

California. Indian lands in California total approximately 570,000 acres.¹¹ One hundred percent of the population of the California condor, listed by the Secretary and by the state as endangered, occurs on Indian land. The following species listed by the state as endangered or threatened range on and off Indian lands and waters in California. Indian lands probably

⁹Values listed for habitat percentages are estimates provided by the state fish and wildlife agency of the subject state. These values vary by season and year as well as in response to weather patterns and population and prey base cycles. Copies of the state submissions have been lodged with the clerk and made available to counsel for the parties.

¹⁰Supra note 7, at 2; Bureau of the Census, U.S. Department of Commerce, Statistical Abstract of the United States: 1981, at 197.

¹¹Supra note 7, at 2.

comprise five to ten percent of their habitats: Humpback sucker (End.); Desert pupfish (End.); Elf owl (End.); Least Bell's vireo (End.); Peninsular Bighorn Sheep (Thr.); Stephen's Kangaroo Rat (Thr.); Southern Rubber Boa (Thr.); and the Yellow-Billed Cuckoo (Thr.).

Colorado. Indian lands in Colorado total approximately 756,000 acres.¹² There are two Indian reservations in Colorado, the Mountain Ute Reservation in the southwestern corner and the Southern Ute Reservation along the southern boundary. The Bald eagle and the Peregrine falcon, both listed by the state as endangered as well as being on the federal list, range on and off the reservations onto surrounding lands.

Florida. The Florida panther is listed as endangered on both the Secretary's list and that of the state. It is estimated that less than fifty individuals of this species survive in the wild, making the Florida panther one of the most endangered of all listed species. It is estimated also that Indian lands in Florida constitute approximately eight percent of panther habitat. In December, 1983 one James Billie, an enrolled member and a chief of the Seminole Tribe, was arrested by state wildlife officers and charged with a violation of state law for the killing of a Florida panther on the Seminole Reservation. Relying in part on the decision of the Eighth Circuit in *United States v. Dion*, 752 F.2d 1261 (8th Cir. 1985), the Florida state court dismissed the case against Billie. *State v. Billie*, No. 83-202 (20th Judicial Cir. for Hendry County, July 9, 1985). The state has taken an appeal.

¹²Ibid.

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Bald eagles and only one nesting pair of Peregrine falcons. A small portion of the state's wintering eagle population, less than ten percent, depend on reservation land for foraging and roosting.

New Mexico. Indian lands in New Mexico constitute approximately 7.5 million acres or about ten percent of the land area of the state.¹³ The following species listed by the Secretary (along with the percentage of habitat within the state represented by Indian lands) occur on Indian lands in the state: Black-footed ferret (End., 10%); Peregrine falcon (End., 5-10%); Bald eagle (End., 5%); Whooping crane (End., less than 5%); and Colorado squawfish (End., 50%). The New Mexico Department of Fish and Game reports that habitat represented by Indian land is important habitat for the Black-footed ferret and that for the Colorado squawfish is among the best potential habitat in the state.

North Dakota. Indian lands within the state total approximately 850,000 acres.¹⁴ The following species are reported to occur on reservation lands during periods of migration: Bald eagle (End.); Interior least tern (End.); and Whooping cranes (End.).

Oklahoma. According to BIA, Indian lands in Oklahoma total approximately 1.2 million acres.¹⁵ Such lands include literally thousands of tracts located in a majority of the 77 counties of the state. The Oklahoma Department of Wildlife Conservation reports that the following species range on and off Indian

¹³Ibid.

¹⁴Ibid.

¹⁵Ibid.

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Idaho. Indian lands in Idaho total approximately 825,000 acres.¹⁶ The following species migrate through or winter on reservation land: Whooping crane (End., 10%); Bald eagle (End., 5%); Peregrine falcon (End., 15%). "Summer" and "fall" chinook salmon which pass through the Nez Perce Indian Reservation are now listed by the state as threatened species.

Minnesota. Indian lands in Minnesota total approximately 764,000 acres.¹⁷ Approximately ten percent of the range within the state of the threatened Gray wolf is on reservation lands. The endangered Peregrine falcon migrates through reservation land in Minnesota but does not nest on such lands. Bald eagles, which are listed as threatened in Minnesota, nest on reservation lands. Of 226 Bald eagle nests known to exist in 1985, 14 nests occur on reservations.

Montana. Indian lands in Montana total approximately 5.2 million acres.¹⁸ The following species occur on Indian reservations: Gray wolf (End., 5%); Peregrine falcon (End., 10%); Bald eagle (End., 3%); Whooping crane (End., casual migrant); and Grizzly bear (Thr., 5%). Reservation lands in Montana are essential to recovery of the Gray wolf, serving as part of a travel corridor for dispersal of wolves.

Nevada. Indian lands total 1.2 million acres.¹⁹ In Nevada, the Bald eagle and the Peregrine falcon are the two terrestrial species listed as endangered. Nevada currently supports approximately 150 wintering

¹⁶Ibid.

¹⁷Supra note 7, at 2.

¹⁸Supra note 7, at 2.

¹⁹Supra note 7, at 3.

lands but that, owing to the unconsolidated nature of the tracts, it is not possible to estimate the amount of habitat represented by Indian land: Gray bat (End.); Indiana bat (End.); Ozark big-eared bat (End.); Peregrine falcon (End.); Bald eagle (End.); Whooping crane (End.); Interior least tern (End.); Red-cockaded woodpecker (End.); American alligator (End.); Leopard darter (Thr.); and Ozark cavefish (Thr.).

Oregon. Indian lands in Oregon total approximately 760,000 acres.¹⁹ Both the Bald eagle, listed in Oregon as threatened, and the Peregrine falcon, listed as an endangered species on the federal and state lists, are found foraging and passing over reservation lands within the state.

South Dakota. Indian lands in South Dakota total over 5 million acres and comprise approximately ten percent of the total area of the state.²⁰ The following species listed by the state as endangered or threatened range on and off reservation lands: Black-footed ferret (End.); Pearl dace (End.); Peregrine falcon (End.); Whooping crane (End.); Bald eagle (End.); Interior least tern (End.); Osprey (Thr.); Mountain lion (Thr.); River otter (Thr.); and Swift fox (Thr.). For two days in October 1985, seven Whooping cranes used a portion of the Standing Rock Reservation as a stopover site during the annual fall migration through South Dakota.

Utah. Indian lands in Utah total approximately 2.3 million acres.²¹ The following protected species occur

¹⁹Ibid.

²⁰Ibid.

²¹Ibid.

on Indian reservations in Utah: Peregrine falcon (End., 10%); Bald eagle (End., 12%); Black-footed ferret (End., 20%); Desert tortoise (Thr., 5%); and Colorado squawfish (End., 10%).

Wisconsin. Indian lands in Wisconsin total approximately 400,000 acres.²² The following endangered or threatened species (along with estimates of total habitat within the state represented by reservation habitat) are found within the boundaries of Indian reservations within the state: Bald eagle (End., 10%); Osprey (End., 10%); Cooper's hawk (Thr., 5%); Red Shouldered hawk (Thr., 5%); Wood turtle (Thr., 5%); Longear sunfish (Thr., 10%); Pine marten (End., 5%); and Canada lynx (End., 10%). Each of these species ranges on and off Indian reservations with the possible exception of the wood turtle populations on the Bad River and Stockbridge Reservations.

The following endangered and threatened species occur to a lesser degree on Indian lands or waters in Maine (Bald eagle, Peregrine falcon); Michigan (Great Lake cisco, Thr.); Mississippi (American alligator, Black bear, Red-cockaded woodpecker, Gopher tortoise); Nebraska (Bald eagle, Peregrine falcon, Interior least tern, Flying squirrel (Thr.), and Piping plover (Thr.)); and Wyoming (Bald eagle, Peregrine falcon, Grizzly bear, and Black-footed ferret).

It is evident from the foregoing that numerous endangered and threatened species occur on Indian reservations. In the circumstances, the endangered species program would be seriously undermined if the prohibitions of the act are not applicable in the face of Indian hunting and fishing rights.

²²Ibid.

SUMMARY OF ARGUMENT

1. Numerous decisions of this Court hold that treaty rights to hunt and fish are subject to state conservation laws which are reasonable and necessary. These decisions apply to on-reservation as well as off-reservation hunting and fishing rights. *Washington v. Fishing Vessel Ass'n*, 443 U.S. 658 (1979); *Puyallup Tribe v. Washington Game Dept.*, 433 U.S. 165 (1977). Congress can hardly be possessed of a lesser power in respect of Indian rights when exercising its authority under the Constitution to enact a conservation measure.

2. If abrogation or modification of the treaty right is required, Congress' intention to do so was clearly expressed without the necessity for an express statement that Indian hunting and fishing rights were being modified. The purpose of Congress in the Endangered Species Act, the ultimate touchstone, was to halt the extinction of species of fish and wildlife and an uncontrolled treaty right to take such species is plainly repugnant to the congressional purpose. The provision of the Bald Eagle Protection Act authorizing issuance of permits to take eagles for Indian religious purposes also makes clear that Congress intended the prohibitions of that act to be applicable to Indians with treaty rights to hunt and fish.

ARGUMENT

1. Treaty Rights to Hunt and Fish on Indian Reservations Are Subject to Reasonable and Necessary Conservation Laws And Exercise of the Treaty Right May be Regulated in the Interest of Conserving Fish and Wildlife

Numerous decisions of this Court hold that Indian treaty rights to hunt and fish are subject to state conservation laws which are reasonable and necessary and which do not discriminate against Indians. *Oregon Dept. of Fish & Wildlife v. Klamath Indian Tribe*, —

U.S. —, 87 L.Ed.2d 542, 554 (1985); *Washington v. Fishing Vessel Ass'n*, 443 U.S. 658, 684 (1979); *Puyallup Tribe v. Washington Game Dept.*, 433 U.S. 165, 171 (1977) (*Puyallup III*); *Antoine v. Washington*, 420 U.S. 194, 207 (1975); *Washington Game Dept. v. Puyallup Tribe*, 414 U.S. 44, 49 (1973) (*Puyallup II*); *Puyallup Tribe v. Dept. of Game*, 391 U.S. 392, 399-400 (1968) (*Puyallup I*); *Tulac v. Washington*, 315 U.S. 681, 684 (1942); *New York ex rel. Kennedy v. Becker*, 241 U.S. 556, 563 (1916); *United States v. Winans*, 198 U.S. 371, 384 (1905). These decisions apply to on-reservation as well as to off-reservation fishing rights. As stated by Justice Stevens in *Washington v. Fishing Vessel Ass'n*,

In support of our holding [in *Puyallup III*] that the State has regulatory jurisdiction over on-reservation fishing, we reiterated Mr. Justice Douglas' statement for the Court in *Puyallup II* that the "Treaty does not give the Indians a federal right to pursue the last living steelhead until it enters their nets."

443 U.S. at 684. The Indian fishing rights in these cases are rights secured in treaties with the United States and, as such, are federal rights which have nonetheless been subjected to appropriate state conservation laws. States are not free to abrogate treaties and, because the Supremacy Clause requires invalidation of state legislation that burdens or conflicts with federal laws or treaties, *De Canas v. Bica*,

424 U.S. 351, 357 n.5 (1976), it is apparent that the application of appropriate state conservation laws is not deemed by the courts, at least not this Court, to constitute abrogation of a treaty or to be in conflict with the federal right to hunt and fish.

State regulation of the exercise of the federal fishing right is reconciled either by adopting the view that treaties bestow no right to pursue endangered wildlife or, to equal effect, by taking the view that the treaty right is subject to the inherent police power of the state to protect the public welfare in a matter of such signal importance as the conservation of wildlife.²² In none of the cases cited did this Court require abrogation or modification of the treaty before state

²²As stated by Justice Douglas in *Puyallup II*, "The police power of the State is adequate to prevent the steelhead from following the fate of the passenger pigeon; and the Treaty does not give the Indians a federal right to pursue the last living steelhead until it enters their nets," 414 U.S. at 49. The police power is broadly described as the inherent power of government to promote public welfare by restraining and regulating the uses of liberty and property. *E. Freund, The Police Power*, iii (1976) (hereinafter "Freund"). The essential justification of the police power is that each individual in society must submit to such restraints in the exercise of liberty or in the rights of property as may be required to remove or reduce the danger of abuse of such rights. *Freund*, 6. While it would certainly go too far to say that a treaty may not diminish the scope of the police power of a state, the power of a state to enact measures essential to the health and safety of its people will not readily be deemed by the courts to have been contracted away. *E.g., Campagnie Franaise v. Board of Health*, 186 U.S. 380, 394 (1902). Thus in *Puyallup II* the Court observed that if treaty fishermen were allowed untrammelled on-reservation fishing rights they could frustrate the rights of non-Indian citizens recognized in the Treaty of Medicine Creek. 423 U.S. at 177.

conservation laws could apply to regulate the exercise of the Indian right. Neither did the Court in the cases cited indicate that a claim for compensation would lie in consequence of state regulation of the exercise of the treaty right. In exercising its authority under the Constitution to enact a conservation measure, Congress could hardly be possessed of a lesser power in respect of Indian rights.

2. If Abrogation or Modification of the Treaty Right Is Required, Congress Clearly Expressed Its Intention to Do So in the Endangered Species Act and the Bald Eagle Protection Act

A treaty between the United States and an Indian tribe is deemed to be a contract between two sovereign nations. *Lone Wolf v. Hitchcock*, 187 U.S. 553 (1903). Treaties and acts of Congress are accorded equal weight by the Constitution as domestic law and, in consequence, an act of Congress enacted subsequent to an international agreement supersedes the agreement as domestic law. Repeal by implication is not favored, however, and this Court has frequently held that the purpose of Congress to supersede a treaty provision must be clearly expressed. *E.g., Menominee Tribe v. United States*, 391 U.S. 404 (1968). But this rule of construction must give way before an intention clearly expressed and in the Endangered Species Act the intention of Congress to halt the decline of species was expressed clearly and emphatically. Congressional intent in the Bald Eagle Protection Act to limit Indian hunting rights is also manifest. Taking of an endangered species, wherever

the taking occurs, is thus repugnant to the congressional purpose.

This Court has characterized the Endangered Species Act of 1973 as "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978), and as "affording endangered species the highest of priorities." 437 U.S. at 194. This broad scope notwithstanding, the court below held that Congress failed to abrogate treaty hunting rights in the Endangered Species Act: "We cannot find an express reference to Indian treaty hunting rights showing congressional intent to abrogate or modify such rights in either the statutory language or legislative history of this Act." *United States v. Dion*, 752 F.2d at 1269. In addition to applying the so-called "express reference" test, the court below noted that even if it were to "look for congressional intent to abrogate or modify treaty rights in less reliable sources," it would reach the same conclusion. 752 F.2d at 1269. In the view of amicus curiae, Congress spoke with unaccustomed strength in the Endangered Species Act and clearly intended to abrogate or modify treaty hunting and fishing rights. This claim of repeal is based on the following grounds.

A. *The Language of the ESA Prohibition.* Section 9 of the Endangered Species Act proscribes classes of conduct which could directly touch on endangered species, and paragraph (B) of subsection (1) thereof declares it unlawful for any person subject to the jurisdiction of the United States to "take any such species within the United States or the territorial sea of the United States." 16 U.S.C. 1538(a)(1)(B). Po-

itive repugnance exists between this provision and the treaty hunting right.

B. *The Exception Provisions.* Section 10 of the Endangered Species Act provides that permits for the intentional taking of an endangered species may be granted for only two reasons: for scientific purposes and to enhance the propagation or survival of the affected species. 16 U.S.C. § 1539(a)(1)(A). In addition to such takings, taking by Alaska Natives for purposes of subsistence is exempted from the provisions of the act by section 10(e). 16 U.S.C. § 1539(e), but the Secretary may regulate such taking on a finding that endangered or threatened species taken for subsistence are being materially and negatively affected. 16 U.S.C. § 1539(e)(4).

The Endangered Species Act is thus composed of sweeping prohibitions and narrowly framed exceptions. Of specific relevance to the instant inquiry is that in each case where taking of an endangered species is permitted by statute the activity is subjected to government control. Taking for scientific or propagation purposes requires a permit from the Secretary and subsistence take by Alaska Natives, which is exempted from the provisions of the act, may be subjected to the act upon the appropriate finding by the Secretary. The scheme of the act is thus to permit intentional taking in limited circumstances and to provide back-up authority to control exempted taking by Alaska Natives, if conditions warrant. That Indian hunting which could substantially affect endangered species would remain wholly unregulated flies in the face of and is repugnant to the congressional scheme.

C. *Congress Refused to Exempt American Indians.* Comprehensive endangered species legislation was

144 (1972). In a subsequent written submission—the Interior Department urged the House Subcommittee to resolve the Indian question expressly if it chose to extinguish treaty-secured rights else such rights would continue to be preserved. *Ibid.* That judgment was obviously premature.

The 93d Congress again addressed the subject of endangered species protection. This time the Administration bills, H.R. 4758 and S. 1983, contained no exemption for taking by American Indians, and no such exemption was contained in H.R. 37, 93d Cong., 1st Sess. (1973), which, as amended, passed the House or in S.1983, 93d Cong., 1st Sess. (1973), which, as amended, passed the Senate. The Senate bill in section 11(d) contained an exception for subsistence take by Alaska Natives and this provision was accepted by the House in conference and later enacted into law. § 10(e), 87 Stat. 897, as amended, 16 U.S.C. § 1539(e). The closing of the Indian "loophole" by revision of the Administration bill in direct response to subcommittee concern is strong indication that Congress did not intend to permit Indians to take endangered or threatened species. Moreover, enactment by Congress of a specific exemption for subsistence take by Alaska Natives provides a compelling basis for applying the maxim *expressio unius est exclusio alterius*. See *Tennessee Valley Authority v. Hill*, 437 U.S. at 188. When Congress meant to exempt a class of persons it did so explicitly.

D. *Indian Religious Purpose Permits Under the Bald Eagle Protection Act.* The Eagle Protection Act declares that "whoever, within the United States or any place subject to the jurisdiction thereof, without being permitted to do so as provided in this sub-

considered in both the 92d and 93d Congresses before being enacted by the latter Congress. H.R. 13081, the Administration bill introduced in early 1972 as part of President's Nixon's environmental program, contained a broad prohibition against the taking of endangered species but section 5(a)(2) of the bill exempted American Indians who take endangered species for their own consumption pursuant to a treaty.²⁴ The Administration bill on the Senate side, S.3199, 92d Cong., 2d Sess. (1972), similarly exempted American Indians from the taking prohibitions and, of the other two bills considered during Senate hearings, S.249 and S.3818, the former bill introduced by Senator Cranston also exempted Indians but only in connection with taking for religious purposes. § 5(b)(6), S.249, 92d Cong., 2d Sess. (1972).

In the 1972 House hearings on H.R. 13081, the Subcommittee on Fisheries and Wildlife specifically addressed questions to Administration witnesses on the "loophole" which would be established by the Indian exemption. The Subcommittee was troubled by the proposed exemption and observed that demise of a population or species would in the long run be to the injury of the Indians. *Endangered Species: Hearings Before the Subcomm. of the House Committee on Merchant Marine & Fisheries*, 92d Cong., 2d Sess. 144 (1972). In a subsequent written submission the Interior Department urged the House Subcommittee

²⁴Section 5(a)(2) of H.R. 13081, 92d Cong., 2d Sess. (1972) provided:

The prohibitions contained in this section shall not apply to American Indians, Aleuts, or Eskimos who take endangered species for their own consumption or ritual purposes in accordance with a treaty or pursuant to Executive order or Federal statute.

chapter" shall knowingly take any bald eagle shall be fined not more than \$5,000 or imprisoned not more than one year or both. 16 U.S.C. §§ 668(a). The Eagle Protection Act authorizes the Secretary to issue a permit to take a bald eagle "for the religious purposes of Indian tribes" if the Secretary after investigation shall determine "that it is compatible with the preservation of the bald eagle" to permit such taking. 16 U.S.C. 668a. The court below held that Congress had failed in the Eagle Protection Act to abrogate treaty hunting rights just as it had failed to do so in the Endangered Species Act.

According to the court of appeals, "the only possible indicator" of an intent to abrogate lay in the 1962 amendment which authorized the Secretary to permit taking of eagles for religious purposes. *United States v. Dion*, 752 F.2d at 1270. The court dismissed the permit provision as an indicator, however, by construing it to be available to persons other than Indians: "In other words, it [the permit provision] could have been deemed necessary to permit non-Indians to hunt eagles, on or off a reservation, in order for the Indian tribes to obtain enough eagle parts for their religious needs." 752 F.2d at 1270. To put the matter charitably, the Eighth Circuit's tortured interpretation is simply inadmissible.²⁰

In sum, several clear expressions of congressional intent were available to the court of appeals but it

²⁰The Secretary's permit regulations make clear that no person may take, possess or transport a bald eagle or parts thereof without a valid permit and that applications for Indian religious purpose permits will be accepted only from individual Indians. 50 C.F.R. 22.11, 22.22(a).

grass, the ultimate touchstone, to reverse the loss of wildlife species by, among other things, controlling take thereof. As Justice Holmes stated in a similar case involving conflict between a treaty permitting transshipment of liquor through the United States and the later Volstead Act forbidding it, the letter of the statute is too strong. *Grogan v. Hirum Walker & Sons, Ltd.*, 259 U.S. 80, 89 (1922).

CONCLUSION

For the reasons set forth above, the decision of the court of appeals should be reversed.

Respectfully submitted,

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December 6, 1985

SUBMITTED BY GORDON ROBERTSON

IN THE UNITED STATES COURT OF APPEALS
FOR THE EIGHTH CIRCUIT

No. 84-5042-MH

SIERRA CLUB, et al.,

Plaintiffs-Appellees,

v.

WILLIAM CLARK, Secretary of
the Interior, et al.,

Defendants-Appellants.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MINNESOTA
FIFTH DIVISION

BRIEF OF AMICUS CURIAE

INTERNATIONAL ASSOCIATION OF
FISH AND WILDLIFE AGENCIES

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BRIEF OF AMICUS CURIAE

INTERNATIONAL ASSOCIATION OF
FISH AND WILDLIFE AGENCIES

The International Association of Fish and Wildlife Agencies (hereinafter "the Association") submit this brief amicus curiae, pursuant to written consent of all parties^{1/} and in support of the position of appellants Clark, et al., seeking reversal of the order of the District Court granting summary judgment in favor of appellees Sierra Club, et al.

INTEREST OF AMICUS ASSOCIATION

The Association is a voluntary unincorporated association dedicated to coordinating the efforts of public administrative agencies responsible for the protection and management of the fish and wildlife of North America. Founded in 1902, the

^{1/} The written consents of appellants and of appellees are attached hereto as Addendum A.

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Association numbers among its government members the wildlife agencies of all fifty states and the Commonwealth of Puerto Rico.

This litigation involves the meaning of the Endangered Species Act of 1973 ("the Act" or "the ESA"), the legality of a number of state and federal programs which permit taking of threatened species of fish and wildlife and, ultimately, the durability of programs for the conservation of threatened and endangered species throughout the country. The issue of concern to the membership of the Association is whether the Secretary of the Interior through the United States Fish and Wildlife Service ("the Service") may authorize regulated takings of threatened species absent a showing that such takings are required by population pressures.

Of twenty-eight states having resident populations of threatened species of fish and wildlife, approximately half utilize some regulated taking as a part of their total conservation effort on behalf of those species. The purposes and procedures are different for each program. In each case, however, the professionals responsible for conserving these threatened species have determined that limited taking is necessary to secure the future of the species, to reestablish their populations, and to reduce the pressures which have led to their decline.

Existing programs fall within two general categories: those developed to reduce hostile contact between man and the species and those developed to preserve the species' habitat. In the case of the timber wolf a major factor in its conservation is

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the minimization of human conflict. Other programs of this type are designed to prevent injury to persons or property and to minimize illegal, unnecessary killings of the subject species. Such programs are presently in use in ten states and proposed in two others. Habitat programs are designed to encourage local residents to preserve habitat suitable for the threatened species. Three states utilize programs of this type.

The grizzly bear programs of Montana and Washington, as well as the program currently being considered in Wyoming, permit state agents to kill these threatened species to avoid hazards to local property or human life. Relocation attempts have proved unsuccessful in all three states due to the propensity of the bears to return to their original locations and to resume their problem conduct. Washington, which permits taking of nuisance bears only, reports that between twenty-five and forty bears are killed each year by state agents. Montana, which also opens a limited hunting season for grizzlies, reports that between ten and fifteen nuisance bears are taken annually within the Bob Marshall ecosystem, the principal grizzly habitat region in the state. Montana estimates the total average grizzly population in the ecosystem to be stabilized at 400 to 650 bears.

Montana also permits a limited annual hunting season in the northwestern part of the state which closes as soon as the number of bears taken, including those taken under the provisions applicable to nuisance bears, reaches twenty-five. All takings must be reported to the state within five days and the

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take is carefully monitored to prevent abuses. The state reports that illegal taking is extremely rare.

Montana and Washington share a strong conviction that their grizzly bear programs are essential to both human safety and the future of the species. While the direct taking may not at first glance seem consonant with conservation of the grizzly, the fact is that limited take results in bears being harbored in undeveloped, less-populous regions which are better suited to the needs of such wilderness species while local residents are encouraged to maintain suitable bear habitat and to cooperate in conservation efforts because the grizzly is not perceived as a threat. It is also a fact that private citizens will assume the task of reducing the problem bear population if the state does not accomplish the task. All grizzly bears would come to be perceived as threats and the number of killings would increase unnecessarily.

The alligator take programs of Alabama, Florida, Georgia, Louisiana, South Carolina, and Texas are other examples of conflict-reducing conservation programs. Each of these states authorizes taking by state agents or licensed trappers of nuisance alligators classified as threatened or threatened by similarity of appearance. Their alligator populations, once considered endangered in much of the region, are now stable or steadily increasing.

Florida has the most extensive program for nuisance alligators. When a substantial complaint is received against a

-5-

particular animal, the local program administrator issues a permit and an identification tag to a private trapper. The offending alligator is then killed, tagged, and delivered to a state officer by the trapper. In return, the trapper is permitted to sell the alligator meat and receives seventy percent of the price brought by the hide. Approximately 1,800 to 2,000 problem alligators are killed each year under this system, a small percentage of the state's total alligator population. As in the case of the grizzly bear and the timber wolf, state officials responsible for conservation of the alligator are concerned lest elimination of these programs result in the perception of all alligators as a menace. States with such alligatory programs have had no significant problem with illegal alligator killings since such programs have been established.

Louisiana provides an economic incentive to local landowners to maintain wetlands property by permitting them to harvest and sell alligators listed as threatened by similarity of appearance. Much of this land otherwise would be drained for agricultural or commercial use. The direct consequence of this program has been the stabilization of the alligator's habitat and a marked increase in the alligator population, central purposes of the Endangered Species Act. It is estimated that ninety percent of the state's fish and crustacea depend upon these same wetland marshes during at least one phase of their life cycles and, thus benefit indirectly.

In the case of the Utah prairie dog the Fish and Wildlife Service has proposed a rule to reclassify the prairie dog from endangered to threatened status in order that the State of Utah may permit regulated taking of the species. The proposal, which may be found at 48 Fed.Reg. 21604 (May 13, 1983), would permit as many as 5,000 animals to be taken annually in portions of the Cedar and Parowan Valleys. Damage in these valleys has now reached the point at which federal and state conservation agents are concerned that landowners will resume treatment of the prairie dog as a pest to be wiped out by any means available. Concentrations of prairie dogs on private farms with attendant loss of crops and damage to moving equipment from prairie dog mounds and burrows have resulted in annual losses to local farmers in excess of \$1 million. Regulations would allow a permit-holder to shoot, trap, or flood the nuisance prairie dogs, but proscribe the use of poison. The program is designed to permit an accurate count of the number killed, to prevent secondary poisonings, and, thereby to retain government control of the conflict-reduction effort.

Some of the colonies in the Cedar and Parowan Valleys are now at the edge of the carrying capacity of their territories and becoming vulnerable to outbreaks of disease. Population pressure is, therefore, one of the factors indicating the necessity of a take program. The Utah Game and Fish Department, deeply concerned by the potential consequences of the pressure felt by the

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farmers "to take matters into their own hands," has advanced the proposal principally in order to eliminate that pressure.

Arizona, California, Colorado, and Nevada also operate programs which permit take of certain threatened subspecies of trout. These programs result largely from a judgment that the benefits of recreational fishing and public familiarity with a species will do more to guarantee its survival than the potential injury from fishing would do to endanger it.

The Apache trout in Arizona, the Little Kern Golden Trout and the Paiute Cutthroat Trout in California, the Rio Grande, Greenback and Colorado Cutthroat Trout in Colorado, and the Lahontan Cutthroat Trout in California and Nevada may all be taken in certain instances. The estimated number of any one of these subspecies taken in a given season ranges from twenty-four to several thousand. In some cases the threatened species has strayed into tributaries inhabited by other gamefish popular with fishermen. In other cases the species is so thoroughly intermingled with other, non-threatened species that entire regions would have to be closed to all sportfishing if taking of the threatened species were prohibited. No injury has been found to result to the populations harvested under either of these conditions.

In addition, fisheries management personnel have found that the public is more supportive of habitat reclamation and repopulation efforts when it is familiar with the threatened species and recognizes the recreational value in its conservation.

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Because habitat degradation has been the most significant factor in the decline of these species, such public support is of the utmost importance.

The variety of the programs cited here is evidence of the complexity and the diversity of factors affecting the conservation of threatened species of fish and wildlife. Congress was aware of these factors when it drafted the Endangered Species Act, and authorized the Secretary to tailor his regulations to meet a wide range of possibilities.

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ARGUMENT

The District Court's Interpretation of the Endangered Species Act Creates Incongruities, Defeats a Major Purpose of the 1973 Act, and Would Impair Programs Established by Congress in 1982 Amendments to the Act

Granting plaintiffs' motion for summary judgment, the District Court ruled that the Secretary of the Interior is not permitted to authorize taking of a wildlife species listed as threatened unless there be a showing that the species, in this instance the Eastern Timber Wolf, is exceeding the population limits of its ecosystem. Amicus submits that the court's interpretation does not withstand analysis: it creates incongruities among the Act's provisions and defeats a major purpose of the 1973 legislation. In so asserting, we do not deny that dissonance exists between operative provisions of the Act and the statutory definition of the term "conservation." In failing to harmonize that definition with expressed purposes of Congress, however, the District Court's ruling misinterprets a major element of the Act, a misinterpretation which unless rectified will have adverse consequences for conservation of both threatened and endangered species in the United States.

A. Need For the 1973 Legislation. The first attempt at comprehensive endangered species legislation was enacted in 1966 as the Endangered Species Preservation Act, Pub.L. 89-669, 80 Stat. 926. The act authorized and directed the Secretary of the Interior to initiate and carry out a program to conserve species of native fish and wildlife which he found to be threatened with

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extinction. Funds were made available for acquisition of endangered species habitat. Three years later Congress enacted the Endangered Species Conservation Act of 1969, Pub.L. 91-135, 83 Stat. 275, which authorized the Secretary to assist on an international level by developing a list of species threatened with worldwide extinction and prohibiting importation of such species or their parts.

The 1973 legislation, recommended to Congress by President Nixon in his Environment and Natural Resources State of the Union Message of February 15, 1973, greatly increased the authority of the Secretary and the scope of the endangered species program. In hearings leading up to enactment of the ESA of 1973, witnesses testified to the need for two fundamental improvements in the existing scheme, both changes providing greater flexibility to the Secretary. Witnesses urged that the Secretary have authority to list a species even though not endangered throughout its entire range if endangered in a significant portion of its range and, second, that the Secretary have authority to list not only species threatened with extinction but also species likely within the foreseeable future to become so.

The principal administration witness, Nathaniel P. Reed, Assistant Secretary for Fish, Wildlife and Parks, testified:

With respect to species likely within the foreseeable future to become threatened with extinction, H.R. 4758 would provide discretionary authority to the Secretary to regulate the import, taking, and interstate transportation of those animals. The type and degree of control exercised over this class of animal would depend on the circumstances of each species. It

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could include a complete or partial ban on taking if deemed appropriate. Authorities provided in our bill will enable us to provide a "halfway house" for [threatened species]

Hearings Before the House Subcommittee on Fisheries and Wildlife Conservation and the Environment on H.R. 37 and related bills, 93d Cong., 1st Sess. 202 (1973) (hereinafter "1973 House Hearings"). And see 1973 House Hearings at 226 (statement of Howard Pollock, Deputy Administrator, National Oceanic and Atmospheric Administration). Another administration witness, Douglas P. Wheeler, Deputy Assistant Secretary for Fish, Wildlife and Parks, testified before a Senate subcommittee on the matter of sanctions and regulations for endangered species in contrast to those for threatened species as follows:

With respect to the sanctions and the regulations applicable in each case: In the first, those actually threatened with extinction, the sanctions would be much the same as they now exist with the addition of a prohibition against taking.

With the second category, the Secretaries respectively responsible for those species would have a [sic] a matter of discretion the opportunity to impose those regulations, including sanctions imposed with respect to the first category, as are appropriate to an individual case.

Hearings Before the Senate Subcommittee on Environment on S.1592 and S.1983, 93d Cong., 1st Sess. 54 (1973) (hereinafter "1973 Senate Hearings"). Secretary Wheeler at another point testified:

We don't have authority to recognize a second category under the present law. We recognize only one degree of endangerment; that is threatened with extinction.

1973 Senate Hearings at 61. And see testimony of Robert W. Schoning, Acting Director, National Marine Fisheries Service, 1973 Senate Hearings at 78.

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Both houses responded favorably to the administration's request to extend listing authority to threatened species. As the Senate Report states:

The bill provides a broadened concept of "endangered species" by affording the Secretary the additional power to list animals which he determines are likely within the foreseeable future to become threatened with extinction. This gives effect to the Secretary's ability to forecast population trends by permitting him to regulate these animals before the danger becomes imminent while long-range action is begun. By creating two levels of protection, regulatory mechanisms may more easily be tailored to the needs of the endangered animals. Flexibility in regulation is enhanced by a provision which allows for listing if the animal is endangered over a "substantial portion of its range."

S.Rep. No. 93-307, 3. And Senator Tunney, floor manager of the Senate bill, S. 1983, explained the matter to his colleagues as follows: "The two levels of classification facilitate regulations that are tailored to the needs of the animal while minimizing the use of the most stringent prohibitions." 119 Cong. Rec. S14515 (daily ed. July 24, 1973).

While the Senate was speaking of "tailoring" regulations to the particular needs of threatened species, the House manifested its agreement thereto by referring to the "almost infinite" number of options available to the Secretary respecting threatened species. Thus, in explaining the purpose of Section 4(d) of its bill, the House Report on H.R. 37 stated:

[Sec. 4](d) The Secretary is authorized to issue appropriate regulations to protect endangered or threatened species; he may also make specifically applicable any of the prohibitions with regard to threatened species that have been listed in section 9(a) as are prohibited with regard to endangered species. Once an animal is on the threatened list, the Secretary has an almost infinite number of options

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available to him with regard to the permitted activities for those species. He may, for example, permit taking, but not importation

H.Rep. No. 93-412, 12. The Secretary's authority to pursue the nearly "infinite" number of options was set forth in section 4(d) of the House bill which, as reported and passed, provided broad authority to issue regulations with respect to both endangered and threatened species.^{2/} By contrast, the companion provision in the Senate passed bill, section 4(e) of S.1983, invested the Secretary with broad authority to issue regulations only with respect to threatened species.^{3/}

In the committee of conference on the differing versions, the conferees adopted the Senate version and, redesignated as section 4(d), the broad regulatory authority with which Congress invested the Secretary was limited to regulations dealing with threatened species. As enacted, section 4(d) provided:

Protective Regulations - Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species. The Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1) . . . with respect to endangered species

§4(d), 16 U.S.C. §1533(d). In brief, with respect to threatened species the Secretary is authorized by section 4(d) to issue such regulations as he deems necessary and advisable to conserve such

^{2/} Section 4(d), H.R. 37, 93d Cong., 1st Sess, Union Calendar No. 294, as passed, 119 Cong.Rec. H8014 (daily ed. September 18, 1973).

^{3/} Section 4(e), S. 1983, 93d Cong., 1st Sess., Calendar No. 289, as passed, 119 Cong. Rec. S14541 (daily ed. July 24, 1973).

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species and, in the process, may choose to prohibit any act prohibited by section 9(a)(1), the provision containing prohibitions relating to endangered species.

B. The District Court's Interpretation. Congress plainly established differing levels of protection to accompany the dual classification system of the ESA. As interpreted by the district court, however, a literal reading of section 3(2) reveals that the broad discretion Congress granted the Secretary in section 4(d) with respect to threatened species it revoked almost entirely in the definition section. In section 3(2) Congress defined the terms "conserve" and "conservation" to mean the methods and procedures necessary to bring endangered or threatened species back to the point where the measures of the act are no longer necessary. The definition goes on to state that such methods include all those activities associated with scientific resources management and "in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking." §3(2), 16 U.S.C. §1532(2). According to the district court, inasmuch as the definition of the word "conservation" limits regulated taking to situations where population pressures cannot otherwise be relieved, the Secretary's broad authority in section 4(d) is curtailed substantially by the section 3(2) definition.

Because this limitation on and complication of the Secretary's section 4(d) authority is obviously out of harmony with congressional intent to establish differing levels of protection

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for the two classes -- an intent which is undeniable -- the district court apparently sought to find new differing levels of protection through an examination of section 3(2) and section 9, to the exclusion of section 4(d). The court's reasoning emerges as follows:

An endangered species may not be taken because such a taking is prohibited by section 9(a)(1);

But, since section 3(2) speaks of taking in an extraordinary case, that taking must refer to threatened species because, as seen, taking of an endangered species is prohibited;

Therefore, regulated taking referred to in section 3(2) refers only to threatened species and then only to relieve population pressures.

Instead of having authority, therefore, to take endangered species in the extraordinary case and threatened species in a variety of circumstances, the district court constructed new differing levels: the Secretary can never take an endangered species and may authorize taking of a threatened species only in the extraordinary case to relieve population pressures.

The court's inverted logic is simply wrong. Apart from the fact that the analysis completely excludes section 4(d) from consideration, there is nothing in section 3(2) to warrant the court's conclusion that an endangered species cannot be taken to relieve population pressures. In addition, the major premise of the court's argument is false because section 10 of the act, 16 U.S.C. §1539(a), expressly authorizes the Secretary to issue permits for the taking of endangered species. With respect to the Secretary's authority, therefore, one is left with a ruling

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that eliminates the distinction between protections for endangered and threatened species.

In addition to undermining the experimental population program which we describe in the following section, the district court's interpretation also produces absurd results. The taking of endangered species is prohibited by section 9 but the taking of threatened species is nowhere prohibited in the act, Congress having left it to the broad discretion of the Secretary to decide whether to prohibit taking. Under the district court's interpretation, however, Congress in a definition section forbade the Secretary to undertake activities which it did not forbid of private citizens, an extraordinary result made even more so when one considers that it was Congress' intention to provide broader authority and greater flexibility to the Secretary. If the Secretary is authorized to prohibit take completely or not prohibit take at all, it logically follows that he is authorized under federal law to permit a limited take, which he sought to do here in respect of timber wolves.

C. The District Court's Interpretation Impairs The Experimental Population Program. If planned carefully, populations of endangered and threatened species can be introduced into areas outside their current range, and such introductions may be beneficial in securing the restoration of listed species. Prior to 1982, however, a shortcoming of the ESA of 1973 was its tendency to discourage voluntary introduction of species in areas of their historic range. According to the report of the House

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Committee on Merchant Marine and Fisheries accompanying H.R. 6133, Endangered Species Act Amendments of 1982, "State fish and wildlife agencies had probed the feasibility of introducing such experimental populations, but they feared political opposition to reintroducing species unless some assurances were simultaneously extended to prevent the creation of Endangered Species Act problems." H.Rep. No. 97-567, 97th Cong., 2d Sess. 17. The public opposition arose because experimental populations of species listed as endangered were looked upon by many as "typhoid Marys" such that, wherever introduced, recreational and developmental activities were subject to being closed down or cut back to avoid harming an endangered species protected by rigid provisions of the act.

To encourage efforts to establish such populations, Congress in 1982 relaxed the provisions otherwise applicable to experimental populations of endangered species. The method selected by Congress to relax the protections was to treat such populations as -- threatened species. As stated in the House Report:

Each experimental population is to be treated as a threatened species under the Act which grants the Secretary broad flexibility in promulgating regulations to protect such species. These regulations can even allow the taking of threatened animals. The Committee fully expects that there will be instances where the regulations allow for the incidental take of experimental populations, such as the inadvertent taking of experimental fish species by those fishing for other species in the same body of water. The Committee also expects that, where appropriate, the regulations could allow for the directed taking of experimental populations. For example, the release of experimental populations of predators, such as red wolves, could allow for the taking of these animals if depredations occur or if the release of these populations will continue to be frustrated by public opposition.

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H.Rep. No. 97-567 (Part 1), 34. A new subsection (j) dealing with experimental populations was added to section 10 of the act and, as enacted, provides in pertinent part as follows:

For the purposes of this chapter, each member of an experimental population shall be treated as a threatened species

§10(j)(2)(C), 16 U.S.C. §1539(j)(2)(C). If the district court's interpretation be correct, then the House Subcommittee on Fisheries and Wildlife Conservation which drafted and brought to passage the Endangered Species Preservation Act of 1966, the Endangered Species Conservation Act of 1969, the Endangered Species Act of 1973, and the Endangered Species Act amendments of 1977, 1978, 1980, and 1982 has misunderstood this fundamental aspect of its legislation and has launched the experimental population program on an invalid premise. While the understanding of the 97th Congress cannot override the intention of the enacting 93d Congress, we believe the views of the 97th are entitled to significant weight particularly where the language of section 4(d) and the legislative intent of the enacting Congress seems unmistakable on this particular matter, the only doubt arising from the existence of the section 3(2) definition. Seatrain Shipbuilding Corp. v. Shell Oil Co., 444 U.S. 572, 596 (1980).

D. Construing the Intent of Congress. It is manifest from the statutory scheme and the legislative history that Congress intended section 4(d) to be the Secretary's authority for implementing the purposes of the act with respect to threatened

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species. As outlined above, section 4(d) of the House bill had invested the Secretary with broad authority to issue "necessary and advisable" regulations for both endangered and threatened species. However, the Senate version confined this broad grant to regulations dealing with threatened species.

The committee of conference adopted the Senate's approach thereby reserving section 4(d) as the basic source of the Secretary's authority in respect to threatened species and making it the vehicle through which the Secretary could undertake the "almost infinite" number of options without at the same time authorizing the same options for endangered species.

Concerning the definition of section 3(2), the conference report stated:

In view of the varying responsibilities assigned to the administering agencies in the bill, the term was redefined to include generally the kinds of activities that might be engaged in to improve the status of endangered and threatened species so that they would no longer require special treatment.

H.Rep. No. 93-740, at 23. The foregoing is the only explanation given by conferees for the redefinition and, while the passage is not particularly revealing, it gives no indication that the conferees were troubled by the broad grant of authority in section 4(d) and chose the section 3(2) definition as a means to curtail that authority.

Because it would contradict the broad grant of section 4(d), create absurd results, and defeat the clearly expressed intention of Congress in 1973 as well as in 1982, amicus Association

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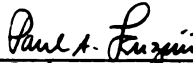
submits that section 3(2) should not be read as curtailing the broad grant of authority on section 4(d).

CONCLUSION

For the reasons set forth above, the decision below should be reversed.

Respectfully submitted,

International Association of
Fish and Wildlife Agencies,
Amicus Curiae



By Paul A. Lenzini
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Dated: April 23, 1984

ADDENDUM A



U.S. DEPARTMENT OF THE INTERIOR

DHK:djg
90-1-4-2459

Washington, D.C. 20530

April 10, 1984

Paul A. Lenzini, Esq.
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1730 Pennsylvania Avenue, N.W.
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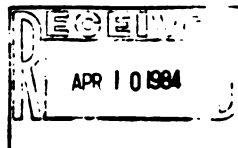
Re: Sierra Club, et al. v. Clark, et al.,
No. 84-5042-MN (8th Circuit)

Dear Mr. Lenzini:

As we have discussed earlier, the Department of Justice, as the representative of the Department of the Interior, consents to the filing of an amicus curiae brief in the above-captioned case by the International Association of Fish and Wildlife Agencies.

Sincerely,

Dianne H. Kelly, Attorney
Wildlife and Marine Resources Section
Land and Natural Resources Division



[illegible]

612 / 371-9300
TELEX 428131

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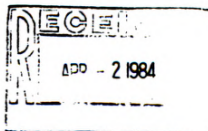
Dear Mr. Lenzini:

Very truly yours,

Steven C. Schroer

SCS:crn

cc: Jon M. Hopeman
Philip J. Olfelt
David A. Gayer



The following documents were submitted by Mr. Michael Weber, Center for Environmental Education, and are included in the hearing file of the Subcommittee on Fisheries and Wildlife Conservation and the Environment.

Final Environmental Impact Statement: Listing and Protecting the Green Sea Turtle, Loggerhead Sea Turtle, and Pacific Ridley Sea Turtle Under the Endangered Species Act of 1973. National Marine Fisheries Service, 1973.

Five-year Status Reviews of Sea Turtles Listed Under the Endangered Species Act of 1973. National Marine Fisheries Service, 1985.

Kemp's Ridley Sea Turtle. Jack B. Woody, Aududon Wildlife Report, 1986.

Kemp's Ridley Turtle or Atlantic Ridley. Peter Pritchard and Rene Marquez, International Union for Conservation of Nature and Natural Resources, 1973.

A Historical Review of the Status of Sea Turtle Populations in the Western Gulf of Mexico. Henry H. Hildbrand.

The Occurrence of Sea Turtles In Louisiana Coastal Waters. Deborah A. Fuller and Anne M. Tappan, 1986.

Trawling Efficiency Device: A New Concept for Selective Shrimp Trawling Gear. John W. Watson, John P. Mitchell, and Arvind K. Shah, 1986.

Final Environmental Impact Statement for the Fishery Management Plan for the Shrimp Fishery of the Gulf of Mexico, United States Waters. Gulf of Mexico Fishery Management Council, 1981.

The following documents and articles were submitted for the record by Mr. Mike Weber of the Center of Environmental Education

EXHIBIT A
II

MEMORANDUM

TO: Michael Weber, Center for Environmental Education

FROM: Bo Brickleyer, University of Washington

DATE: November 1, 1985

RE: Sea Turtle Rescue Efforts

In the following pages you will find hardcopy of the work that I have done to date. This is broken down into an outline; a summary of the various aspects of the problem as I have seen it; and detailed information in the case of some of those categories.

INDIVIDUAL CHART B1

History of Efforts to Get Gear Modification in Place/Delay

June 2, 1970	Hawksbill and Leatherback turtles listed as endangered 35 Fed. Reg. 8495. No substantiating information.
July 30, 1970	Atlantic Ridley proposed for listing as endangered. 35 Fed. Reg. 12222, 12225. No text provided by the Bureau of Sports Fisheries and Wildlife of the Fish and Wildlife Service, Department of Interior.
December 2, 1970	Final listing of Atlantic Ridley. 35 Fed. Reg. 18319, 18322.
December 28, 1973	Fish and Wildlife Service proposes a listing of the Green and Loggerhead turtles under old endangered species law.
April 23, 1974	Petition by F. Wayne King who lists the green as an endangered and the Loggerhead and Pacific Ridley as threatened. He speaks of the incidental take of Loggerhead by shrimp fishermen in his letter.
July 3, 1974	Preliminary in-house NMFS review of the status of the three turtles completed.
August 8, 1974	Governors notified.
August 16, 1974	NMFS/FWS begins formal review; announced in federal register at 39 Fed. Reg. 29605, 29606.
April 22, 1975	NMFS/FWS proposes critical habitat rule making species listed under the ESA at 40 Fed. Reg. 17764-17765.
May 20, 1975	NMFS/FWS proposes listing of Green, Loggerhead and Pacific Ridley as threatened with accompanying Regs to conserve and manage. Published at 40 Fed. Reg. 21982-21985. 50C.F.R.s227.22(c) speaks to incidental catch of sea turtles during fishing operations which were published in the draft DEIS unchanged. [It was eliminated from the final rules. See 50C.F.R.s227.72(c) exceptions for injured, dead, or stranded specimens. The draft version prohibited incidental catch if the person responsible for the fishing gear or vessel was fishing in an area of substantial breeding or feeding of the turtles.]
January 30, 1976	DEIS forwarded to CEQ. In the draft the following pages speak to incidental capture (but without talk of devices for elimination) and the ones underlined are especially relevant: pp. 16, 32, 46, 52, 57, 58, 63, 67, 68, 80, 84, 85.

- July 18, 1977 Memorandum of understanding signed between NMFS and FWS defining the goals of each relative to the joint administration of the ESA re: marine turtles. In support of that arrangement, Jack Gehring, NMFS Deputy Director, agreed to prepare a new budget to permit expanded gear research and biological research on turtles. (Joy Ginter memo.)
- July, 1978 FEIS issued listing the Green, Loggerhead and Pacific Ridley as threatened and the Green was listed as endangered for its Florida and Mexican Pacific Coast breeding populations and the Pacific Ridley was listed as endangered for the Mexican Pacific Coast breeding population. The FEIS speaks to incidental take at pp. 56, 61, 62, 69, 75, 85, 86, 87, 93, 94, 99, and 105. At page 105 it speaks to an excluder panel (EP) as a mitigating measure. Comments to the DEIS as published in the FEIS re incidental catch and the response of the Service are found at pages 124-136, especially 134-136 wherein it is stated by the Service that the excluder panel work will be finished by the end of the 1978 shrimp season and then regulations will be promulgated.
- Remainder 1978?
- 1979?
- January 1980 Information meeting with members of the Southeast Region Marine Turtle Recovery Team wherein the team concurred with the approach of schedule of target dates for proposed regulations as outlined in the NMFS Work Plan, discussed *infra* p. 5. (Work Plan p. 7.)
- July 29, 1980 NMFS southeast region MTRT letter to Allen, Acting Director, NMFS southeast region, notifying him of high levels of Sea turtle strandings.
- August 12, 1980 Kaufmann of Fund for Animals letter to Richard Frank re: 1200+ strandings. Calls for scoping meeting within four weeks to let shrimpers know new gear (EP's) required by "Sea Turtle Regulations for 1981."
- August 15, 1980 Monitor joins with 26 other conservation groups to endorse FFA position.
- August 22, 1980 News release by Fund for Animals stating that at least 1,300 Sea Turtles had died and washed up on the beaches in May, June and July of 1980 and on p. 4 calling for the following: "Turtle excluder devices to be built into the trawl nets which have been designed by the National Marine Fishery Service and other turtle conservation operations! techniques must be utilized as soon as possible."
- August 27, 1980 Frank's response to Kaufmann--a package of letter; specific responses; work plan:
- (1) "I have recently approved a work plan for the development of regulations to reduce sea turtle mortality in the Southeast." Says that copy is enclosed and that important conservation strategy likely to be incorporated in the regs to be the requirement that shrimpers use turtle excluder panels when fishing in areas of known high turtle

mortality; regs to be issued in proposed form before the end of 1980; final regs issued before the beginning of the 1981 brown shrimp season.

(2) He noted that there had been meetings with shrimpers to urge them to voluntarily reduce trawl times.

Specific response to Kaufmann's recommendations of August 12.

"2b. NOAA favors the issuance of the Sea Turtle Recovery Plan at the earliest possible date. It is anticipated that the promulgation of Seaturtle regulations, currently the subject of an approved NOAA work plan, and other ongoing and anticipated NOAA activities, will implement many of the measures expected to be recommended in the recovery plan."

"WORK PLAN FOR DEVELOPMENT OF REGULATIONS TO REDUCE SEA TURTLE MORTALITY IN THE SOUTHEAST REGION." (10 pp., undated)
 "The work plan is intended to develop regulations that will reduce sea turtle incidental catch and resultant mortality in the Southeast region by requiring excluder panels on shrimp trawls in limited areas for limited time periods." (pp. 1-2) Lists seven alternatives to be explored in DSEIS: 1-no regs; 4-require regs, 5 and 6-voluntary use. (p. 4)

At p. 5 option 4 states in discussing these alternatives, "require the excluder panel on all shrimp trawls. Although required use of the panels throughout the fishery would do the most to reduce sea turtle mortality, sea turtles are not caught in all areas of the Gulf and South Atlantic. In addition, the best excluder panel design will reduce the shrimp catch depending on operator skill. Our goal is to require the use of a panel to prevent or substantially reduce the incidental catch of sea turtles without significantly reducing the shrimp catch." Discussing option 5 to rely on a voluntary program, the work plan states that "some voluntary use of the excluder panel will occur." (my emphasis)
 Discussing option 6 educational programs, it notes at p. 6 that educational efforts will continue with or without regulations. The schedule of target dates shows that the supplemental environmental impact statement should be completed by January 1, 1981 with regulations being implemented on April 30, 1981 (pp. 7-8)
 Sea Turtle Meeting, Charleston, South Carolina held by the National Marine Fisheries Service to examine ways to reduce Sea Turtle mortality from commercial shrimping activities: summary by Charles A. Oravetz dated September 24, 1980.

September 18, 1980

September 24, 1980

Oravetz summary: Voluntary reduction of trawl time but not in Gulf except when encountering high mortality; emergency regs for resuscitation and relocation; explanation of schedule for the development of regs; Seidel presented research results including information on preliminary testing of an excluder device currently reducing 90% of turtle captures with a shrimp loss of 11% or less, with definitive results (to be completed December 1980; Seidel notes that reduction in trawl time helpful: at 60 minutes showed only a 2% mortality, whereas 90 minutes showed a 6% mortality jumping to 26% for 270 minutes.

_____, 1980 Mill Kaufman report on September 18, 1980 meeting (undated), he talks about numbers, the correlation; the trawl time duration; that the Gulf and South Atlantic Fisheries Development Foundation will be the industry's coordinator for volunteer efforts to eliminate sea turtle incidental take and mortality, new resuscitation procedures, trawl time/death correlations, no night trawling, closed southeast sounds.

October 2, 1980 Atlanta Scoping Meeting--"a public scoping meeting ... on regulations to reduce Sea Turtle mortality in southeast waters."

_____, 1980 Official NMFS summary, undated, unsigned, with appendices; conclusions from Charleston: voluntary effort to reduce trawl time and emergency regs on resuscitation; CEE statement made part of the record; Kaufmann statement not; lists additional issues and alternatives identified at the meeting.

Jim Sternberg, CEE statement (5 pp.) dated October 2, 1980 suggests data needs including No. 6, a detailed economic analysis of the industry and of the impact of the regs (p. 2). Gives suggested regulations: trawl time duration, criteria for identification of critical areas; use of excluder panel, voluntarily or mandatorily; flexibility in gear requirements so that the new "excluder device" could be used when proven adequate, effective resuscitation (pp. 3-4).

Concluding remarks at p. 5: "In closing, I wish to emphasize that we earnestly hope that a voluntary, cooperative solution to the incidental take of Sea Turtles will be achieved. However, I must state clearly that our primary concern is with the recovery of Sea Turtle populations in the United States and around the world. If voluntary, cooperative efforts are unsuccessful, we shall seek other remedies."

Formal comments submitted by the Georgia Fishermen's Co-op, Inc. on October 16, 1980 stressed that the regulations should be voluntary and hoped that the Service would continue in their research to eliminate turtles and not shrimp. The comment stressed that not enough data was available to make the devices mandatory at this date. (Comment no. 6, p. 2)

In Appendix C to the formal summary by the National Marine Fisheries Service, it responds to comments made during the scoping process and at p. 2, the question of correlation between sea turtle strandings and shrimp is addressed, with the Service responding that information is circumstantial and noting that data indicates that most strandings occur during the periods when and on the beaches off which concentrated shrimp trawling occurs and that strandings decrease when the trawling diminishes. It goes on to note that the rule making is not solely based on the stranding data, but that incidental catch and mortality estimates were derived from vessel observations as well as turtles on the beach.

Jim Sternberg's summary of the meeting (undated, 3 pp.): at p. 2, "(1) notes that the excluder cage is an alternative that both shrimpers and conservationists seem to agree upon and that research should be

completed by next season and that a regulation that would require the panel would have a provisional clause to allow the use of the cage when available.

- October 7, 1980 Emergency resuscitation regulations published: modify 50 C.F.R. S 227.72(e)(1)(i) at 45 Fed. Reg. 66460.
- February 24, 1981 Letter from ECB to Oravetz re: adding ECB to list to obtain DSEIS for regs for 1981 shrimp season.
- February 27, 1981 Oravetz responds: DSEIS "still undergoing review and may require revision before it is issued as a public review document." [Review probably was being undertaken in D.C. because work plan had document in D.C. by this time although this is not stated.]
- April 2, 1981 ECB to Oravetz, two-page letter complaining that another summer and fall would obviously pass without regulations re: trawl time and excluder device; seems to be getting low priority; asks that process be speeded up or emergency regs promulgated.
- April 22, 1981 Oravetz responds: acting regional director says regs to be developed as quickly as possible and emergency regs may be implemented if necessary; meanwhile transfer TED technology ongoing.
- August 26, 1981 DSEIS from D.C. to Florida; Roe is meeting with Fox on it; given to Chuck to revise.
- September 1, 1981 Letter, EDF (Been and Brown) to Byrne, Administrator of NOAA: complaining that no action had been taken on the turtle problem except resuscitation regs; that TED is economically viable and calling for "timely action on regulatory solutions to the problem."
- September 10, 1981 Oravetz notified that EDF replaces ECB as far as legal representation to obtain regulations.
- September 22, 1981 Response by Byrne to Brown: "We share your concern for the recovery of sea turtles and recognize the need to reduce or eliminate the mortality of sea turtles incidentally taken by the shrimp fishery. We are confident that recently developed gear, the turtle excluder device (TED), will resolve the problem of incidental take of sea turtles. The National Marine Fisheries Service (NMFS) is considering the most effective way to encourage the use of the TED by the shrimp industry, i.e., through a regulatory requirement or through voluntary action by the fishery. The NMFS is currently demonstrating the TED to shrimpers and will be closely monitoring the extent of voluntary use by the industry." Byrne notes that strandings are down and that he will be meeting with Been and others on September 22. [Weber there?]
- September 23, 1981 Letter, ECB to Weber: information from call to Oravetz related: D.C. has sent DSEIS back for another revision and Kannelle (D.C.) is going to St. Petersburg in October to help.
- October 6, 1981 Letter, ECB to Oravetz: where is DSEIS? Is there a revised work plan that ensures regs in place by 1982?

- July 18, 1977 Memorandum of understanding signed between NMFS and FWS defining the goals of each relative to the joint administration of the ESA re. marine turtles. In support of that arrangement, Jack Gehringer, NMFS Deputy Director, agreed to prepare a new budget to permit expanded gear research and biological research on turtles. (Jay Ginter memo.)
- July, 1978 FEIS issued listing the Green, Loggerhead and Pacific Ridley as threatened and the Green was listed as endangered for its Florida and Mexican Pacific Coast breeding populations and the Pacific Ridley was listed as endangered for the Mexican Pacific Coast breeding population. The FEIS speaks to incidental take at pp. 56, 61, 62, 69, 75, 85, 86, 87, 93, 94, 99, and 105. At page 105 it speaks to an excluder panel (EP) as a mitigating measure. Comments to the DEIS as published in the FEIS re incidental catch and the response of the Service are found at pages 124-136, especially 134-136 wherein it is stated by the Service that the excluder panel work will be finished by the end of the 1978 shrimp season and then regulations will be promulgated.
- Remainder 1978?
- 1979?
- January 1980 Information meeting with members of the Southeast Region Marine Turtle Recovery Team wherein the team concurred with the approach of schedule of target dates for proposed regulations as outlined in the NMFS Work Plan, discussed *infra* p. 5. (Work Plan p. 7.)
- July 29, 1980 NMFS southeast region MTRT letter to Allen, Acting Director, NMFS southeast region, notifying him of high levels of Seaturtle strandings.
- August 12, 1980 Kaufmann of Fund for Animals letter to Richard Frank re: 1200+ strandings. Calls for scoping meeting within four weeks to let shrimpers know new gear (EP's) required by "See Turtle Regulations for 1981."
- August 15, 1980 Monitor joins with 26 other conservation groups to endorse FFA position.
- August 22, 1980 News release by Fund for Animals stating that at least 1,300 Sea Turtles had died and washed up on the beaches in May, June and July of 1980 and on p. 4 calling for the following: "Turtle excluder devices to be built into the trawl nets which have been designed by the National Marine Fishery Service and other turtle conservation operational techniques must be utilized as soon as possible."
- August 27, 1980 Frank's response to Kaufmann--a package of letter; specific responses; work plan:
- (1) "I have recently approved a work plan for the development of regulations to reduce sea turtle mortality in the Southeast." Says that copy is enclosed and that important conservation strategy likely to be incorporated in the regs to be the requirement that shrimpers use turtle excluder panels when fishing in areas of known high turtle

September 24, 1982 Letter, ECB to Beck: DSEIS has been sent back to SE for another rewrite even though it just got to D.C. on July 21, 1982. No progress being made on getting it out or TED in use. ESA and NEPA require the draft to be issued. Allege that the Service is consciously delaying taking action. Now wonder if we can get even a voluntary program in effect. "If the Services intent is to use a voluntary program, the longer it waits to get a final EIS so concluding issued, the less likely it will be to have such a program in operation by the opening of the spring 1983 shrimp season. If the conclusion should be to require the use of the TED, anything other than the most expeditious action will preclude the possibility of such regulations in 1983." Ask again for status, timeline, sent a copy of letter to Justice Department.

Beck never responds.

Late 82/Early 83 ??

June 2, 1983 Letter ECB to Beck: When will EA be out?

Beck never responds.

June 2, 1983 Letter, ECB to Oravetz? When will EA be out?

June 8, 1983 Oravetz responds: EA submitted to D.C. May 31, 1983; should not take long.

August 11, 1983 "Environmental Assessment of a Program to Reduce the Incidental Take of Sea Turtles by Commercial Shrimp Fishery in the Southeast United States" is issued.

Analysis of EA

Introductory summary: Program calls for voluntary use; no time limits set; no statement that fishermen have agreed to use it; states that 97% of turtle eliminated, retains less bycatch, catches up to 7% more shrimp and may require less fuel.

- p.1 "1. Purpose of and need for action." NMFS "believes" because of ancillary benefits that shrimp fishermen will voluntarily use TED.
- p.2 First full paragraph: states that ESA listing recognized incidental take.

Third full paragraph says that gear regs "considered" in listing process, but not imposed because of problems with the panel. [FEIS pp. 134-136 in fact states that NMFS's goal was to develop an acceptable net design and promulgate regulations to require use.]
- p.3 Gear program: paragraphs 2 and 3 talk of tow-time reduction and state that it appears to be a partial solution "at least in areas where shorter tow times feasible." "Some shrimp fishermen, particularly in the U.S. south Atlantic, have stated that they use shorter tow times to conserve Sea Turtles"
- p.4 First paragraph: States that TED research was begun in late 1980. [In

fact, was developed prior to that and evaluation was initiated in 1980.] "Most effective way of reducing incidental take of Sea Turtles in shrimp trawls." "Bulk of research is complete..." Continuing... to refine the TED." [Note that with few if any pieces of gear is the refinement over 100% complete--or is there even agreement on whether the device is useful or not. Take, for example, the mongoose net which some southeast Atlantic shrimpers swear by and others only swear at.]

Last paragraph "(d) Voluntary TED Program": no time limits given. Program is described as follows: "The program to encourage voluntary use of the TED consists of several complementary actions by NMFS, NOAA's Sea Grant Marine Advisory Service, Shrimp industry representatives, individual shrimpers, and environmentalists. Some actions are underway, and others are being planned." (my emphasis)

p.7 First full paragraph: CEE, EDF and MI have actively supported the TED voluntary program." (my emphasis)

p.8 Line 3: "Therefore, once exposure of the TED to U.S. south Atlantic shrimpers is completed, program emphasis will be shifted to the U.S. Gulf of Mexico." [Note that even though endangered species are in the Gulf, the program started where it was easiest for the Service, in the Atlantic.]

p.8 "II. Alternatives"

"a. No action." The Service recognizes that a number of turtles including endangered ones die at the hands of the shrimp fishery.

b. Require the TED by regulation: Be required on at least 6,030 vessels (40 feet or longer with weight greater than five tons); flawed economic analysis: why cost different to shrimpers if comply voluntarily as opposed to if are required to use the device by regs?

p.8 "III. Environmental Impacts"

Assert that TED be used only on vessels of 40 feet or longer because of limited space on deck and smaller vessels tow for shorter periods of time and therefore turtle mortality not as great. [Proof? Any death of an endangered species must be prevented.]

p.10 Third full paragraph talks of the cost being \$400 to \$600 per year to an individual shrimp vessel to result in a total elimination of 12,236 turtle deaths per year. [Should be less now with materials cost of only \$50-\$60/TED.] Also talks of TED cost expected to be offset by increased shrimp catches and saving of time re: sorting and discarding bycatch as well as some small fuel savings. [This offset not mentioned on p. 9 when speaking of requirement of TED by regulation.]

p.11 "Although there is no historical basis to determine how long it might take for technology transfer to be successful, NMFS believes that it will take from two to five years before a majority of shrimpers are using TED. NMFS plans to monitor the adoption rate and modify program activities should the adoption rate not proceed at a reasonable pace." [NMFS planning documents now in possession of Mike Weber show a

1990 data for the expected use of the TED by 50% of the industry.]

Comments to EA:

Appear to have been oral only and presented at the TED meeting of November 14, 1983, in Tampa, Florida. From the minutes of that meeting, p. 4:

EA assumes less than 100% use; NMFS does not claim to know how many will be used by the industry; the economic analysis is flawed in both the cost/benefit statements and the apparent disparity between the cost of the voluntary and regulatorily required TED use program; concern was expressed over the vagueness of "reasonable progress." In definition thereof, the meeting minutes note at the second full paragraph, "It was agreed that within three years, a majority of the southeastern U.S. shrimp fishermen should be using the TED. Furthermore, usage should be 100% in areas of critical importance to Sea Turtles, particularly the endangered KEMPS Ridley."

1984
1985

?
?

August 23, 1985

Letter, Michael J. Speer, Regional Director, Fish and Wildlife Service to Jack E. Brauner, Regional Director, Southeast Region, National Marine Fisheries Service: FWS position that shrimp trawlers are currently one of primary limiting factors in the recovery of Kemp's Ridley; request a significantly increased program to have TED become standard-use equipment on all shrimp trawlers within U.S. Gulf of Mexico and Atlantic borders by the end of FY 86; re: FMP for shrimp, may warrant S 7 consultation to require TED; Kemp's Ridelys are at such a level that the loss of a single animal is significant to its survival; from '78 through '83, 44% of Kemp's Ridley turtle returns were definitely from shrimp trawlers; 401 dead Kemp's '80 through '84, but equals an insignificant number of total lost; the majority to incidental take by trawlers; NMFS and FWS et placed two satellite transmitters on Rancho Nuevo nesting females in June of 85 and both of the animals were taken by shrimp trawlers in less than 30 days. "Firm measures, which are available to reduce or eliminate the incidental take of this endangered species, must be instituted United States waters."

September 13, 1985

Brauner responds: "The impact shrimp trawlers have on sea turtle populations, including the Kemp's Ridley, is not disputable. Nonetheless, the shrimp industry is beset with with so many other problems that threaten its economic viability that the National Marine Fisheries Service, with dual responsibilities of protecting marine endangered species and managing and developing marine fisheries, cannot at this time, impose burdensome regulations on the shrimp industry." Brauner talks of the economic problems of the shrimp industry; then talks of other reasons that the voluntary TED program must continue: the administration's non-regulatory posture; cost of regulations which would represent 25% of the annual regional office operating budget; that in 1983 they predicted five years for the majority of the shrimpers to be using the TED and allege that problems have been overcome and more shrimpers are using the TED. [The EA

stated two to five years and of the 6,030 boats, less than 3% appear to even have one TED available for use.] Brauner said that with the cooperation of the State of Georgia, they are attempting to provide TEDs to all of Georgia shrimpers [he does not say how many will use it if it is provided to them]. Says that the shrimp FMP does discuss the TED and that there are important closures Texas and the Tortugas shrimp sanctuary. "In conclusion, let me just add that in the complex situation of protecting sea turtles and promoting U.S. fisheries at the same time, I think it is best to have two diverse groups working together. In this case we have shrimpers and environmentalists working together. Let's keep it this way a while longer and see where it gets us."

October 2, 1985

Letter from James W. Pulliam, Jr., Regional Director, Southeast Region, Fish and Wildlife Service, to Jack T. Brauner: Joins Spear, Southwest Region, in voicing disturbance over the high level of Kemp's Ridley mortality and the lack of progress in implementing the TED's use by the shrimping industry. Notes the large numbers of Loggerheads and significant number of Hawksbill, Green and Leatherback turtles as well as some Kemp's Ridleys; that strandings reflect only a portion of the mortality actually occurring, and while not all strandings are attributable to shrimp trawlers, the correlation of sea turtle strandings and shrimping activities is clear enough to leave little doubt as to the significance of shrimping to turtle mortality. Furthermore, those which are dead are often subadult turtles which have survived the most hazardous period in their early life stages, are approaching sexual maturity and hence are extremely important components of the population. "[W]e believe the reduction of incidental take through use of the TED by the shrimping industry would be the single most important recovery action which could be taken to benefit the Kemp's Ridley and sea turtles within the United States beyond current conservation efforts."

"The magnitude of the incidental take threat to sea turtles, particularly the Kemp's Ridley, demands the most aggressive efforts on the part of our agencies which are charged with protection and management of the sea turtle resource."

October 21, 1985

Letter, ECB to Eileen Covey, NOAA, GCO, D.C.: Request for the response, if any, of Gretchen Beck to ECB letter of September 24, 1982.

October 21, 1985

Letter, Spear to Brauner: Says he understands that NMFS will prepare action plan within established time frames (?) to deal with mutual concern over Kemp's Ridley and TED. Further analysis of life status does not look good: most tag returns coming from strandings/takes in Louisiana and Texas; nesting 25% drop, continuing downward pattern. Big trouble; "precarious status;" "extreme and rapid actions more warranted;" "immediate problem."

November 1, 1985

Eileen Covey responds by telephone: have checked files re Gretchen Beck's answer to my letter of September 24, 1982 and there is none.

[End of history/delay individual chart information.]

INDIVIDUAL CHART B2a

Voluntary TED Committee and Other Conservationists Activities
Directed to TED Voluntary Use (Weber/Rayburn)

March 1981	CEE funds TCLE to build and give away TEDs: to be built using NMFS booklet doors on top but due to resistance of shrimpers, not used during the 1981 season.
April 1985	Gulf and South Atlantic Fisheries Development Foundation issues a brochure about the benefits of TED use.
August 1981	ECB goes out with NMFS contractor, Jervis Mason, to observe TED use on the water with shrimpers: It is a success on August 20 and August 22.
November 11, 1981	ECB meets with South Carolina shrimpers and an agreement is made to give the CEE/TCLE-built TEDs to George and Libby Ambrose.
January 5, 1982	Easley paper funded by CEE and MII finished showing current economic reasons for TED use.
February 5, 1982	Revised Easley paper submitted as a final report.
February 11, 1982	Weber to various parties including ECB, Ralph Rayburn, Texas Shrimp Association, and Bob Jones, Executive Director of Southeast Fisheries Association, asking the parties to be on a shrimp industry/conservationists committee whose goal is the adoption of the excluder device. In the letter, notes that NMFS is also developing rigs which may require the use of the excluder device.
February 18, 1982	ECB accepts Weber's offer.
March 1, 1982	Ralph Rayburn accepts, but notes that he does not necessarily agree that the excluder device is the way to proceed. He sends a copy to Ornetz. [So industry comes on board the voluntary committee having notified the committee and the government that is not necessarily in full accord with the committee's goals.]
March 18, 1982	Letter from Roger Anderson, Executive Director, Gulf and South Atlantic Fisheries Development Foundation, Inc. to ECB sending latest background on their trawling efficiency device (TED) which is a promo for TED's use and a description of how to construct it. At that time, TED's cost \$293 per unit, manufactured by DESCO under government contract. The brochure notes that a shrimpier would require a \$1,200 investment (two TEDs and one backup) but should be able to recover the cost of the TEDs in the first year and make a profit, in the case of a large vessel, of \$8,000 over and above the cost of the TEDs due to increased shrimp harvest.
March 31, 1982	ECB to Roger Anderson asking that some DESCO (the manufacturer) TEDs go to some specific South Carolina shrimpers, including George

and Libby Ambrose.

"Spring, 1982"

The Sea Turtle Report, No. 1, p. 1, paragraphs 4-5. "To ensure that the ED is adopted by the shrimp industry, the STRF has convened a committee composed of representatives of the conservation and shrimp communities. This committee's goal is to assure the use of the ED by the U.S. shrimp industry."

"At the same time, the STRF is insisting that the federal government continue to develop regulations requiring the use of the ED, should regulations prove necessary. Although regulations were promised for last year, the federal has yet to issue even draft regulations. Whether the ED is adopted voluntarily or under regulations, delay will only cost the drowning of more Sea Turtles in U.S. waters."

April 20, 1982

Mike Weber, Milton Kaufmann, William Brown, letter to Byrne: Transmitting Easley report and asking for meeting to discuss the TED.

April 26, 1982

Letter from Mike Weber to ECB and others: Invitation to first meeting of "a committee whose focus will be the use of the trawling efficiency device (TED) in the U.S. shrimp industry." Also transmit Easley report to members of the committee.

May 4, 1982

Trawling Efficiency Device meeting: From the minutes:

Michael Weber opened.

Jack Brauner discussed the status of the EIS and the role of the industry/environmental community committee, which he proposed operate under the recovery team and which was to advise NMFS on TED technology transfer and to assist in the transfer.

Chuck Oravetz presented a summary of past, current and future activities for the voluntary technology transfer program for the TED. 17 built by DESCO and distributed; 87 under construction by DESCO under Contract to GSAFDF.

John Colburn of DESCO: "Demand exceeds supply;" "sincere interest" he believed in voluntary acceptance based upon bycatch exclusion and increased shrimp catch and that forcing the use of the TED would likely meet with considerable resistance.

Will Seide summarized gear research relating to the TED by the date of this meeting (May 4, 1982) "The TED has been shown to reduce turtle catch by 97%, increase shrimp catch by up to 7%, reduce bycatch, and reduce trawl drag. Future research efforts will be directed towards commercial vessel evaluation and demonstrations, bycatch studies, trawl-type evaluations, energy evaluation, and control testing and development. The project goal is to encourage and accelerate voluntary use of the TED technology in the southeastern shrimp fishery by documenting and demonstrating potential benefits."

Don Ekberg discussed the goals and objectives of the voluntary TED technology program. "Fine tune."

Group discussion: Important to get user information on user satisfaction and recommendations for fine tuning. "The group was further concerned that the TED get into the fishery as quickly as possible, while allowing for voluntary acceptance." (p. 2) The committee was to be co-chaired by Michael Weber and Ralph Rayburn with meetings every three months.

Brauner summarized the meeting "(1) A very active committee program is anticipated that will concentrate on a voluntary TED technology transfer program in 1982. (2) The voluntary program, extensive regulations, or area/time specific regulations will be evaluated after 1982 depending on the success of voluntary program."

Attachments to the minutes of the meeting included copies of the three government presentations made.

The first is on the voluntary program. Page 1 is entitled "VOLUNTARY TED PROGRAM, PAST ACTIVITIES": This begins on page 1 with a listing of the Charleston meeting in September 1980 and continues with workshops in March and April of 1981, lists the TED demonstration contract to Jarvis Mason in August, September, October of 1981, includes the Easley economic analysis in February 1982, and the TED construction and distribution contract awarded to GSAFDF/DESCO MARINE. Page 2 lists: Voluntary TED program, Current Activities: TED construction, TED Information brochures, DSEIS "being revised to propose voluntary program with regulatory alternatives." It concludes with formation of industry committee as a "sounding board--assist with program."

Page 3 speaks to FUTURE ACTIVITIES and notes that the DSEIS goes public and "promotes free and open discussion of alternatives." This also notes that the industry committee/NMFS monitor's success of voluntary program.

- June 1, 1982 STRF "East and Gulf Coast News" No. 1, p. 3: "TED Developments: Conversationists and representatives of the shrimp industry met recently to discuss means of achieving voluntary adoption of the Trawling Efficiency Device (TED) in the U.S. shrimp fishery during the 1982 season. . . . NMFS also plans to issue a draft supplemental environmental impact statement regarding means of reducing Sea Turtle mortality incidental to shrimp fishing early in the summer [1982]."
- June 11, 1982 Letter, ECB to Oravetz asking when the 83 more TEDs by DESCO would be available. "If we are going to go with a voluntary program and give away devices, obviously we should have had those TED's available before the season began. . . ." [The TEDs arrived in South Carolina in mid-June.]
- September 14, 1982 Mike Weber/Ralph Rayburn issue invitation to committee meeting, "concerning voluntary use," in order to evaluate past efforts and develop future plans.
- October 6, 1982 Charleston TED committee meeting. At least 25 people attended. From my notes of the meeting, as no formal minutes appear to have been issued.

Oravetz: Says 79 TEDs delivered (of 100 + 96) with the following distribution: NC-5, SC-30, GA-8, FLA-30, Other-6 = 79. Requests currently are GA-24, FLA-26, TEX-2 = 52, therefore, 65 unrequested are left and all but 15 of the 196 have been built. Response to a question as to how many have been used continuously, there is no information although Chuck has talked to "ten to 15" users.

Siedel: Activities concentrated in the Gulf in 1982 with twin trawl work; talking of fiberglass or molded plastic TEDs; even Gulf averaged 50% fin fish bycatch reduction; have just begun dynamic analysis re reduction of drag.

Kuehner: See Grant extension program says 26 DESCOs in SC and 14 of other makes; does not know how many being used.

Georgia Sea Grant: Says more turtles caught in the Sound [in conflict with what the EA ultimately concludes]

Oravetz: Says that the Service new that there were incidental takes when the turtles were listed in 78; that they worked three years on a panel, but that resulted in high shrimp loss. He notes that, "We have been talking about turtles, but NMFS has a responsibility to develop and maintain an economically viable shrimp industry." He says that "some mistake in thinking going on in their quarters; that a couple of years ago they started an EIS, written how many times, that it had not gotten anywhere. That is because it is the wrong approach." He notes that an EIS must have alternatives and some are not viable. Now NMFS will prepare an environmental document, but it won't be an EIS, but instead will be an EA, a tool to be used in the near future. [Notice the change in position from that presented at the TED meeting on May 4, 1982.]

When asked by ECB, in relation to the laws involved, how they have justified their change in position, Oravetz responds that it is because a DSEIS has not gone anywhere and the reason for that was because "it had to have alternatives not viable to some people."

June 21, 1983

Oravetz' memorandum to TED committee: 80 shrimpers got TEDs from DESCO and Service had contacted 30; 24 had used some of the time, usually "when trash shows up;" 21 said more than one week of use; majority of users (23) said it excluded bycatch; 18 said it "worked;" 21 said would use in 83.

_____, 1983

Memorandum from Chuck Oravetz to TED committee enclosing two memorandum about Cameron, Louisiana, noting that 80% of the shrimpers there are using TED.

Enclosed memorandum: August 31, from John Watson to Wil Siedel: Cameron, Louisiana comparison of circular aluminum TEDs being used by the fishermen and the DESCO TED.

September 2, 1983

Memorandum from Wilbur Seidel to Jack Brauner transmitting the August 31 memorandum does not provide any numbers for the statement: "essentially all the boats in the Cameron area are using some form of excluder device."

- November 1, 1983 Mike Weber invitation to ECB and others to reconvening of "working group on voluntary adoption of the Trawling Efficiency Device."
- November 14, 1983 TED voluntary use committee meeting minutes, Tampe, Florida.
- Oravetz: Information on use of a TED by shrimpers is "necessarily incomplete." Estimates 150 vessels are using the TED at least a part of the time and 80 are using DESCO TEDs, eight to ten using standard hardware TEDs. DESCO sold ten to 12; 50 to 60 boats are using aluminum ones in Cameron, Louisiana. Milt Kaufmann suggests that all shrimpers should be contacted and provided TED information (ever done?).
- Selke: On research: "1983 was not an active year. By the end of 1982, research had developed a TED which eliminated turtles without shrimp loss. A program of technology transfer was also undertaken. Also during 1982, research was directed at eliminating finfish bycatch and modifying the TED for use in 4-net trawling systems."
- "In 1983, the construction and installation instructions were updated and about 1,000 copies produced, of which Chuck Oravetz has distributed about 300." "The major focus during 1983 was the modification of the TED to improve finfish operation with a view to 50% elimination of this bycatch." No chartering of shrimp demo boats in 1983 because of money.
- Oravetz: One shrimp per state would be used in 1984 to promote TED (done?).
- After lunch, a discussion of the EA: "Originally, a supplement to the Environmental Impact Statement was intended. However, it was decided to develop an EA because the voluntary use program did not constitute a major federal action." (see comments to EA and individual chart information B1.)
- Group Consensus on use: "It was agreed that within three years, a majority of the southeastern U.S. shrimp fishermen should be using the TED. Furthermore, usage should be 100% in areas of critical importance to Sea Turtles, particularly the endangered KEMPS Ridley. The committee agreed that critical areas and time should be identified as soon as possible.... The committee agreed that Larry Ogren of the NMFS southeast center should complete his report on the distribution of KEMPS Ritleys in the Gulf." (p. 4)
- January 4, 1984 Weber: Discussed ESA; 10(a) conservation plan; committee agreed that the Commerce Department should move expeditiously to issue regulations to implement.
- January 4, 1984 Letter from Charles A. Oravetz, Chief Protected Species Management Branch, Southeast Region, NMFS, to Dr. N. Mirosovsky, Department of Zoology, University of Toronto: submission of an article for publication in newsletter equals a summary of an oral report presented during a meeting of the TED committee. Enclosed article entitled "Trawling Efficiency Device (TED) Technology Transfer Program."

Page 1, first paragraph, "The National Marine Fishery Service (NMFS) has a program to encourage the voluntary use of the Trawling Efficiency Device or TED by the shrimp fishery in the southeastern United States."

Page 2, second full paragraph, states, "The NMFS program began in 1981 when it became apparent that there was a good chance for voluntary acceptance of the TED because of its multiple-use benefits. If the TED is accepted voluntarily, it will eliminate any need for burdensome regulations for the shrimp industry and save the government \$1 million annually in enforcement and administrative costs." (my emphasis) "The program has been successful so far, and NMFS estimates that between 100-200 shrimpers are using the TED on at least a part-time basis."

Page 4, last paragraph, "NMFS plans to continue its promotional program until such time as a majority of southeast shrimpers are using TED. Based on historical adoption of new fishing gear technology, NMFS estimates between three and five years will be required before TEDs are in wide-spread use." [A change from the EA which said two to five years.] [Was this article ever published?]

- March 30, 1984 Memorandum from Oravetz re TED information including FY83 project report summarizing TED activities for 83 in the Oregon to cruise report providing testing of TED off Mississippi in September of 1983. Also notes an evaluation going on of an aluminum version weighing 18 pounds and want to evaluate plastics and fiberglass.
- April 10, 1984 Memorandum from Ralph Rayburn, co-chairman, to TED advisory committee, noticing meeting on May 3 in Miami.
- May 3, 1984 Minutes of meeting of TED voluntary use committee, May 3, 1984, Miami, Florida. [Kumpf]
- Weber: Concentrate on endangered turtles, i.e., Kemp's Ridleys. Find out more about them; develop a conservation plan (under 10(a)); require the use of TEDs in specific places.
- Brauner: feels Mike's approach is self-defeating.
- Weber: "Voluntary program is going to take five years, but in the meantime we have to have something. I'm not worried about how the data is being collected, just as long as it is being collected."
- Rayburn: Would like to see the TED further developed.
- May 22, 1984 Letter, Weber to Brauner, thanks for opportunity to participate in review of SE Region's endangered species program and is a follow up on May 3 TED meeting. Stresses need for more info. on Kemp's (redirect pelagic survey work); at pg.3 "I urge that you ask the General Counsel's office to prepare an opinion on how the 1982 (10(a)) amendments might be applied to this situation."
- June 18, 1984 Weber's transmittal of minutes of the May 3 meeting and enclosing a draft memorandum regarding the application of section 10(a) of the

ESA relative to incidental capture of Kemp's Ridley's. "I understand that Jack Brauner will be requesting an opinion on this or a similar approach from the NOAA general counsel's office."

- February 2, 1985 Letter, Oravetz to ECB, notes that the aluminum TED has proved inadequate; a 24-pound fiberglass and a 34-pound pipe collapsible are being developed; "no concrete estimates of the number of U.S. shrimpers using TED, but estimate between 200-300. I hope to do a summary later this year to gain a better estimate."
- September 26, 1985 Memo from Mike Weber re meeting regarding use of the Trawling Efficiency Device at p. 2 of which he notes that "NMFS intends to forward to the office of management and budget draft proposed regulations implementing Section 10(a) of the ESA in October."
- October 17, 1985 Conversation between ECB and Mike Gossinger (sp?) in NOAA general counsel's office, fisheries: Informed that there was no 10(a) regs on the way to OMB; that there was a rough first draft somewhere in the program shop, but it was not developed sufficiently to be reviewable by the general counsel's office. While he did not know when a draft might get to him, he guessed by the first of the year.
- October 17, 1985 Letter, Mike Weber to Dr. Richard Berry, Southeast Fishery Center, NMFS, requesting information in order to identify and evaluate efforts to encourage the voluntary use of the Trawling Efficiency Device in light of the meeting scheduled for November 7 in New Orleans.

2nd copy

Return to Mr. L. S.

TED File

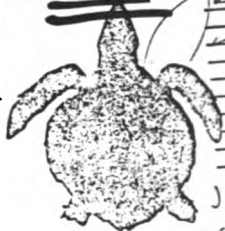
EXHIBIT D

Southeast Region Sea Turtle Recovery Team

December 10, 1985

Mr. Jack T. Brawner
Regional Director, SERO
NOAA/NMFS
9450 Koger Blvd.
St. Petersburg, 33702

RECEIVED
SEP 16 1985
OFFICE OF THE
REGIONAL DIRECTOR



Dear Mr. Brawner,

As an official advisory body to the National Marine Fisheries Service and the U. S. Fish and Wildlife Service, the Sea Turtle Recovery Team is submitting the enclosed position paper concerning use of the TED to protect sea turtles, especially the critically endangered Kemp's ridley. There was almost unanimous support for this position from all Team members with one abstention. We feel the mandatory use of the TED is necessary based on the following:

1. The precipitous decline in the Kemp's ridley population with incidental catch mortality identified as a primary cause.
2. The enormous number of vessels involved (estimated at 6,000 large, deepwater boats and an equal or greater number of inshore boats) over an eight state area.
3. Shrimper association members represent less than one half of these vessels.
4. Even captains that have tried the TED and like it, use it only to solve temporary problems, such as jellyballs. They remove the TED once the problem has cleared up.
5. The traditional and conservative nature of the shrimping industry at accepting changes in their fishing methodology.

We realize that the Department of Commerce has a dual responsibility both to the commercial fishing industry and to endangered species. This first responsibility has been met in the development and refinement of the TED and the NMFS is to be commended for this. It is now time to meet the second responsibility to the endangered Kemp's ridley. This is no less than a question of extinction.

Every means possible should be taken by the Team and all agencies involved to prevent this from occurring. In this regard, we feel it would be useful to convene a team meeting and review all procedures and projects now under way or being considered for Kemp's ridley. Those of us who attended the symposium in Galveston are concerned that some recommendations in the Recovery Plan are not being followed and that some procedures being implemented are not biologically sound. Specifically the ones that give us the greatest concern are: 1) the Padre Island project of trying to establish a nesting colony there; 2) the incubation procedures being used which are producing a male bias in head-started hatchlings; 3) the release site for head-started hatchlings and the manner in which they are being released; 4) and the satellite tracking of adult Kemp's.

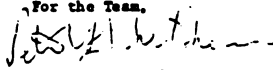
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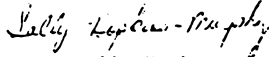
In order to receive support from the shrimp industry to use the TED, it is important to make sure that projects dealing with research and management of Kemp's ridley are cost effective and directly applicable to the recovery of the species. We would hope that such a meeting among representatives from the agencies involved could be held so that necessary changes could be implemented before the next nesting season and/or head-start release.

We look forward to hearing from you soon on this matter .

For the Team,



Peter C. H. Fritchard, Ph.D.



Sally R. Hopkins-Murphy
Co-leaders

cc: M. Spear ✓
J. Pulliman
R. Berry
Recovery Team members

RECOVERY PLAN for MARINE TURTLES

Prepared by
The Marine Turtle Recovery Team

Edited by
Sally R. Hopkins
and
James I. Richardson

Co-Leaders:

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James I. Richardson, University of Georgia
Glenn Ulrich, S.C. Wildlife and Marine Resources Department
Ross Witham, Florida Department of Natural Resources

Date: 10/15/64

Approved: William G. Jordan
William G. Jordan
Assistant Administrator
for Fisheries
National Marine Fisheries Service

vultures and jaguars). Hatchlings may be destroyed on the beach by nest predators or taken at sea by birds (gulls, jaegers, frigate birds) and fish. Juvenile and adult turtles are also vulnerable to attacks by sharks and killer whales. The extent of egg loss has been documented for some species, but mortality of hatchlings, juveniles and adults in the marine environment is unknown for all species.

5. Other natural or man-made factors: Marine turtle populations incur losses from pollution (Witham, 1978) and incidental catch (Hillestad et al., 1978). Losses to incidental catch are particularly costly to the populations since the animals involved are either adults or the larger juveniles which have already survived most natural predators.

Factors which have brought about declines in marine turtle stocks have affected all species to varying degrees. It is not known whether any one cause, acting singly, would have brought about the declines noted above; however, it is doubtful if any species can withstand the combined pressures of all factors acting together.

2.4 INCIDENTAL CATCH OVERVIEW

Introduction

Incidental catch or take is defined as the capture of species other than those towards which a particular fishery is directed. Sea turtles are threatened or endangered with extinction and protected by law; their incidental capture is of considerable biological and political importance. The following overview describes the incidental capture of sea turtles, the species and size classes most frequently taken, and the fishery(ies) and fishing gear involved. Mortality rate, physiological implications of drowning, and resuscitation techniques are also discussed, as well as recent developments proposed to reduce or eliminate accidental sea turtle mortality.

Primary sources of information regarding the incidental capture of sea turtles range from fortuitous encounters of tagged turtles by fishermen to direct observation by fishery biologist/observers stationed on-board commercial fishing vessels. Interview data from vessel captains provide additional information on capture and mortality rates and on areal and temporal distribution of captures. Important life history information can, in this manner, be obtained regarding turtle species, size, behavior and environmental characteristics associated with time and place of capture.

Commercial fishermen have been implicated in many, if not most, of the carcass strandings on southeast U.S. beaches because of the documented history of incidental capture and mortality by the commercial

ishing industry. Not all beach carcasses, however, are the result of drowning in fish nets, and more needs to be done to determine the precise cause of death of these animals.

Turtles wash ashore, buoyed by the gases of decomposition and at this stage are unfit for postmortem examination to determine cause of death. Death by drowning, according to pathologists, is difficult to determine, even under ideal conditions. For some of the carcasses, natural causes of death are indicated. In a few instances, dead turtles show signs of severe trauma or mutilation that can best be described as deliberate acts by man and not caused by predators or collisions with vessels. For the most part, however, circumstantial evidence points to drowning in fishing nets as the principal cause of mortality in beach carcasses.

Species Involved and Marine Habitat

All of the six species of turtles discussed in this recovery plan have, at one time or another, been captured incidental to fishing effort. However, the hawksbill sea turtle appears to have the lowest incidental capture rate of any of the sea turtle species. The paucity of records of incidental captures of hawksbills may be attributed to their preference for tropical reefs and insular habitats for foraging and nesting and to their absence from areas more frequently fished by trawlers and other vessels in search of pelagic and demersal fish stocks (i.e., not reef fish species). It is apparent that the loggerhead,

followed by Kemp's ridley and the olive ridley, is the most frequently captured turtle. The loggerhead is the most numerous turtle in U.S. coastal waters and, therefore, would be encountered more frequently by fishermen. The coastal bays, sounds and nearshore waters inhabited by the loggerhead overlap the area within which most of the southeast region's fishing effort is directed, including the use of drag nets, trawls, pound nets, beach seines and the gill-net fishery. Within this narrow range, the loggerhead is further concentrated in areal distribution by its foraging habits and preference for crabs and mollusks. Feeding areas frequently coincide with the highly productive shrimp grounds. It appears probable that loggerheads are also being attracted to areas of intense shrimping because of the quantities of bycatch discarded during the sorting procedure; bycatch represents an array of food items desired by the turtles. The same is true for Kemp's ridley and presumably for the olive ridley, although the latter may be more pelagic in habits than previously believed. The reported decrease in incidental captures of adult Kemp's ridleys over the last decade is probably the result of a declining population, indicated by the well-documented population decline of the nesting females at Rancho Nuevo, Mexico, over the last 15 years.

Incidental capture rates for the two remaining species, the green and leatherback, are low because of their low relative abundance in this region and because of their preferred habitat. The leatherback is usually pelagic, while the green is most frequently found in association

with shallow marine grass flats dissected by gulleys, scattered reefs, and rock outcrops. Juvenile green turtles are more frequently captured than adults, perhaps because they are more numerous, omnivorous and range widely. The green turtle, as a primarily herbivorous adult, is less likely to encounter fishing gear directed towards the capture of demersal fish and shrimp. The pelagic leatherback rarely encounters trawlers, except when it ranges onto the continental shelf and inshore, feeding on concentrations of medusae and ctenophores which drift shoreward. In recent years, it has been reported that leatherbacks are frequently captured at certain times of the year by longlines set for tuna and swordfish and are also caught and drowned in squid nets in the south-central Pacific (Balazs, pers. comm.).

Size Classes

Sea turtles captured by fishing gear vary according to size and age class. Subadult or immature turtles account for the majority of incidentally captured turtles taken in shrimp trawls. The age class most frequently captured is the larger, older immatures who have survived the period of high mortality experienced by neonates and small juveniles. They are important individuals that must be recruited into the present breeding population.

The preponderance of captured immatures may simply be a reflection of the size distribution of the population (if the capture method is assumed to be random), or it may reflect differences in the habits of

young turtles as compared to adults. The adults may be stronger swimmers and avoid capture by outdistancing the trawl. Adult loggerheads, except when breeding and nesting, apparently frequent deeper offshore waters where they are found on reefs, wrecks, oil rigs or other bottom irregularities usually avoided by the trawl fishery.

Neonate or hatchling turtles and small juveniles are considered to be epipelagic in habits and, thus, should not be vulnerable to demersal and mid-water trawls. They are apparently not captured by surface nets such as purse seines, being either absent from fishing areas or too small to be confined by the larger meshes of the seine. It is generally believed that neonates swim directly out to sea after emerging from the nest and remain as a pelagic animal for an undetermined length of time until they return to coastal waters as midsized juveniles.

Fisheries Involved

In general, two types of fishing gear are involved in the incidental capture of sea turtles. These can be classified as either active or passive. Active fishing gear is pulled through the water, a water straining device. Passive fishing gear is stationary, a trap, a set of hooks or a net. Incidental capture can also be described as occurring in two types of fisheries, the finfish fishery and the shellfish fishery. The latter includes sedentary as well as nektonic or swimming forms. Both fisheries use active and passive gear.

Of all the fishery methods currently employed in the southeastern region, the trawl is believed to capture more turtles incidentally than any other gear. Not only is the trawl effective in capturing turtles,

but the number of trawlers in the fleet is large. In addition to these factors, economic constraints recently placed on the shrimp industry have concentrated the fishing effort along U.S. coastal waters. Rising fuel costs, large inventories of cheaper imported shrimp, and exclusion of U.S. fishermen from traditional overseas fishing grounds have exacerbated this problem. The trawler is now one of the most common types of fishing vessel operating in the coastal zone (more than 6000 shrimp vessels operate in the southeastern U.S. alone). That fact and the previously mentioned occurrence of the loggerhead and ridley sea turtles in commercial shrimping grounds probably accounts for the significantly higher capture rate for this type fishing gear as compared to others.

Other fishing gear employing nets and involved in the incidental capture of sea turtles are the seine, trammel net, gill net and pound net. These are utilized primarily in the shallow coastal waters and in bays and sounds, with the exception of the gill-net fishery for coastal pelagic fishes. All of the above nets, except the pound net, can be either active (straining) or passive (stationary); the pound net is a stationary gear. The sturgeon net fishery has recently been implicated in the capture of sea turtles, primarily loggerheads. Other nets, similarly located and set for shad and sharks, have been implicated as well. If the spring sturgeon run is long, the nets may be intercepting the shoreward movement of sea turtles from their wintering grounds. Breeding adults begin to congregate in coastal areas prior to the onset of the nesting season.

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The pound net fishery of the Chesapeake Bay area is believed to be responsible for mortalities of sea turtles. Deaths from this cause have been reported more or less regularly for the past decade. Recent information from biologists studying this problem in Chesapeake Bay have determined that mortalities occur when the turtles become "gilled" or entangled in the larger meshed lead nets that guide fish into the trap; the lead net is not regularly inspected by the fishermen (Lutcavage, 1981). Turtles that manage to enter the pound net are usually not injured and can be released alive by the fishermen when they remove the catch.

Turtles have been captured with baited hook and line, including sport fishing tackle. In many cases it is apparent that the turtles were attracted to the bait since they actually were hooked in the mouth. However, leatherbacks are frequently captured in the longline fishery for tuna and swordfish, where numerous hooks are suspended from the main line which may extend for miles. It would seem doubtful that the leatherback was primarily attracted to the fish/squid baited hooks, since this species is thought to subsist almost entirely upon coelenterates (cnidarians) and ctenophores. Rather, the placement and extreme length of these longlines, set at the shelf break in a pelagic habitat shared by the leatherback, simply entangle or snag them. Leatherbacks are particularly vulnerable to longline gear because they have the greatest breadth or flipper span of any sea turtle and their epidermis is very soft, not armored with thick scutes as in the other sea turtle species.

Trot lines set for seatrout and redfish in the shallow lagoons of south Texas capture juvenile green turtles, though not necessarily because of baited hooks. Artificial lures have been used in the past, and many of the turtles were hooked in the body or tangled in the lines. Pot warps (buoy lines) of crab and lobster traps ensnare several species of turtles. Encrusting organisms grow on the submerged portion of the floats and warps, when traps and their marker floats are left in the water for long periods of time. The carnivorous turtle is attracted to this food source as well as to crabs or lobsters within the trap. The feeding turtle becomes entangled in the slack warp and drowns. Large numbers of pots, with their attendant floats and warps set closely together, can offer a serious obstacle to turtles swimming through the area; the potential for entanglement is high in this situation.

Capture and Mortality Rate

Discontinuities in fishing efforts and sea turtle distributions confound incidental capture and mortality statistics throughout the southeastern U.S. Furthermore, information collected by interviews is frequently biased and increasingly difficult to obtain. Widespread publicity and sanctions against those responsible for killing turtles are causing this information source to dry up as long as trawlers are implicated. However, reliable information regarding incidental catch rates is being collected by onboard observers and scientists aboard chartered trawlers and government survey vessels. Adequate sampling of the deepwater trawling fleet (over 6,000 documented vessels in the southeast), which includes an equal number of smaller "bay" shrimpers, will require considerable effort and resources distributed over a large geographic area.

Surveys in the south Atlantic and Gulf states have produced preliminary information that resulted in regional estimates of total captures and mortalities (Hillestad et al., 1977; Hillestad et al., 1982; Ulrich, 1978). Information from interviews suggests that the predicted uneven distribution of sea turtle populations reinforces the observed uneven catch distribution among trawlers. Some experienced fishermen risk gear loss by dragging their nets close to underwater obstructions, where they are rewarded by good catches of shrimp from isolated populations that have not been depleted. These fishermen report frequent captures of loggerheads at such sites. The turtles are apparently attracted to the reef-like habitat and bottom disconformities. Capture rates of turtles per hour of trawling effort from these early surveys have been estimated to be less than 0.1 for the Atlantic coast shrimp vessels and less than 0.01 for the Gulf of Mexico fishery. Estimated mortality rates for those turtles captured in both fisheries ranged widely from less than 10% to over 40%. Mortality estimates calculated from interview data were usually much lower than observed mortalities. Other factors could bias observed mortalities, such as the recapture of dead turtles in heavily trawled areas, however.

Seasonal abundances of juvenile turtles also account for differences in catch rate. The younger age classes are highly migratory, moving between developmental areas and, seasonally, out of shallow (colder) coastal waters in the winter months. For the Atlantic fishery, encounters with turtles appear more or less evenly distributed along nearshore waters. An exception would be Cape Canaveral, Florida, an area where an unusual concentration of loggerheads is found in the Port

Canaveral ship channel. The turtle population of the Gulf of Mexico consists primarily of immature turtles, now that the large nesting aggregations of Kemp's ridley have been reduced in size. Concentrations of adult loggerheads have been seen off Western Florida (Ogren, pers. comm.).

Continuing efforts by the NMFS observer program provided additional incidental catch statistics for shrimp trawlers operating off the southeastern U.S. The annual catch of sea turtles, primarily loggerheads, was estimated to be over 45,000. The average mortality rate was estimated to be about 27%, or over 12,000 turtle deaths per year (NMFS, draft regulations (withdrawn)). Despite the greater number of trawlers fishing in the northern Gulf of Mexico, capture rate was lower. This may reflect a lower sea turtle density in the Gulf as compared to the south Atlantic coastal area. Mortality rates were higher in the Gulf, however, and may be the result of longer tow times recorded for this fishery. Study and analysis continues to this date to determine what is the actual range or numbers for the annual mortality of captured turtles.

Capture and mortality rates for other fishing industries are less well documented. Several hundred loggerhead deaths are attributed to the pound net fishery of Chesapeake Bay each season. The smaller sturgeon fishery of South Carolina accounts for some loggerhead mortality, but the duration of the sturgeon fishery is not as long as other fisheries. In the Gulf of Mexico, swordfishermen are accidentally capturing leatherbacks. Some believe the catch rate is high enough to cause

concern. Some of these captains report an incidental capture rate of 15-20 turtles per trip, but only during winter months, and some of the turtles are released alive (Hildebrand, 1980).

Physiological Implications of Forced Submergence

Sea turtles tolerate the anoxic effects of prolonged submergence during normal behavioral activities such as deep diving, resting (sleeping) and winter refuging (dormancy). In situations involving forced submergence, such as capture by trawls or set nets, the exertion to escape may lead to death. The initial reaction of a turtle to a trawl is to outswim the device. This strenuous effort results in an increase in oxygen consumption, with no opportunity to replenish this debt. Once captured, the turtle will struggle to escape the webbing, or, in the case of set nets, to free itself from entanglement. If the exhausted turtle is not released, it will soon drown.

The clinical diagnosis of death by drowning in sea turtles is not completely understood but probably involves several physiological responses, including shock, asphyxia and seawater aspiration. A preliminary report investigating the cause of drowning in trawl-captured turtles reported that the major trauma to these animals was exhaustion from stress and that the length of the submergence period was secondary (Lutz and Dunbar-Cooper, 1979). However, a positive correlation has been found between trawl duration and mortality rate. Thus, length of submergence may be critical to the revival of comatose turtles. Additional research on the physiology of stress in sea turtles will be required before effective resuscitation techniques can be devised.

Besides directly related drowning deaths, mortalities of sea turtles may involve a complex chain of events. For example, the traumatic experience of being captured in a trawl could weaken the turtle and increase its vulnerability to attack by pathogens, parasites or predators. Reports of periodic occurrence of moribund turtles far offshore the south Atlantic coast, and, more recently, of weakened and emaciated individuals washing ashore at Cape Canaveral, may be related to multiple events, especially if premature arousal of winter dormant turtles had occurred or trawl stressed turtles were involved (Carr *et al.*, 1980). Whether or not turtles weakened by disease are more susceptible to "drowning" in trawls or, conversely, exhausted turtles released or escaped from trawls are predisposed to disease related illness and death remains to be determined. Severely traumatized sea turtles may live for months before they become moribund, accumulating an epibiota and parasite load uncharacteristic of normal turtles as they passively drift in tidal and oceanic currents which is uncharacteristic of normal, more active turtles.

Trawlermen believe that turtles, exhausted from a previous capture, are more susceptible to drowning if they are recaptured the same day. Foreign turtle fishermen must remove their catch from tangled nets shortly after capture to have live animals for market. Apparently, netted turtles soon become comatose or drown. Up to 50% of all green turtles caught in tangle nets drown when nets are only checked twice per day (Pritchard, pers. comm.).

INCIDENTAL CATCH AND DISPOSITION OF SEA TURTLES BY THE
BROWNSVILLE-PORT ISABEL GULF SHRIMP FLEETBruce A. Cox
Cameron County Extension Marine Agent
San Benito, Texasand
Robert G. Mauermann
Executive Director, Texas Shrimp Association
Brownsville, Texas

EXHIBIT 6 000037

INTRODUCTION

Over the past twenty years, major sea turtle populations have been on the decline. These problems are particularly noticeable in areas where man has settled along, or has access to, coastal zones where sea turtles reproduce. In these areas many eggs and turtles are harvested and consumed by man (Caldwell, 1960).

Recently, fishing activity, particularly trawling, has been accused of significantly reducing populations of sea turtles. In proposed regulations, as written by the National Marine Fisheries Service, trawling would be prohibited "in areas of substantial breeding and feeding."

Because of the lack of information concerning the effect that shrimp trawling has on sea turtle populations, a survey was taken in the ports of Brownsville and Port Isabel so that a better understanding of the shrimper-turtle phenomenon might be gained.

METHODS

On March 4, 1976, a questionnaire (Table 1) was distributed to various fleet owners in the ports of Brownsville and Port Isabel. Vessel owners were instructed to ask the captains currently operating their vessels the questions appearing on the questionnaire. All interviewed captains were off-shore Gulf shrimpers.

The four geographical fishing sites designated on the questionnaire represent the major areas fished by the Brownsville-Port

- 2 -

Isabel fleet. These subdivisions were selected by members of the industry. When shrimpers offered a numerical range of sea turtles caught in one year, the highest number in that range was recorded and used in data analysis.

RESULTS

In eight days following March 4, 1976, 66 shrimp captains were interviewed. Estimating that there are 450 full-time shrimp captains in the combined ports of Brownsville and Port Isabel, this is a 14.6% sample.

Out of 14,200 days fishing by 66 shrimp vessels, over a period of one year, 230 sea turtles were caught incidental to the shrimp catch. This represents an average of 3.48 (range 0 to 15) sea turtles caught per boat in a fishing year. At this rate, a shrimper would be expected to catch one turtle every 62.5 days of trawling. The average number of days fishing per boat in a "typical" shrimping year was 215 (range 150 to 275).

Of the 230 turtles caught, 84% (192 sea turtles) were alive and 16% were dead. Only 17% (32 sea turtles) of the turtles caught alive were kept for shell and/or consumption while 83% (159 sea turtles) were thrown back. Five percent (2 turtles) of the 38 dead turtles caught were consumed.

Another way to look at these data is that on the average 0.48 live turtles are butchered on a boat in one year and 0.03 dead turtles are consumed per boat in one year.

According to the 66 Gulf shrimp captains, an average of 69% of their time was spent trawling north of the Port Isabel Jetties ("North of the Bar"); 25.72% of their time was spent fishing South of the Port Isabel Jetties to Obregon, Mexico ("South of the Bar");

- 3 -

3.62% of their time was spent trawling in the Campeche area; and 1.64% of their time was spent fishing in the Isla Mujeres - Contoy area. The average number of turtles caught by a boat fishing 90% or more of their time North of the Port Isabel Jetties was 5.03 while boats fishing south of the Port Isabel Jetties off Mexico caught 3.25.

DISCUSSION

Evidence seems to indicate that Gulf turtle populations are declining. In an interview with one shrimpster who fished the waters off Texas and Mexico during the late 1940's and early 1950's, he stated that during approximately 215 fishing days it was not unusual to catch 45 to 55 turtles. This figure is by far greater than the 3.48 turtles currently caught by shrimpsters fishing the same area.

One common point of agreement amongst shrimpsters was that more turtles were caught inshore (less than 10 fathoms) than offshore. Even though major turtle populations in the Gulf are located just north of Tampico and off other Mexican beaches, more turtles were caught by shrimpsters who spent the majority of their time North of the Port Isabel Jetties as compared to those who fished south of the same jetties. This was probably because inshore waters, where turtles feed, were available to U.S. fishermen while the same was not true off Mexican shores. If the majority of those shrimpsters who trawled off the Mexican coast, fished in international waters, one might expect those shrimpsters not to catch large quantities of turtles because of the sheer depth of Gulf waters greater than 12 miles offshore.

- 4 -

CONCLUSION

When reviewing data obtained from this survey, one immediately sees that only small quantities of turtles are taken by the shrimp fleet at Brownsville and Port Isabel, Texas. Surprisingly, only a small percent (16%) of the turtles are dead when brought up in the trawls, and the majority (83%) of those which are alive when brought aboard are returned to the sea in good condition.

From these data, it does not appear that the shrimpers from the Brownsville-Port Isabel fleet are significantly harming turtle populations.

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TABLE I

QUESTIONNAIRE

By March 12, (Friday)

1. Number of turtles trawled up in fishing year.
2. Percent alive trawled up.
Percent dead trawled up.
3. Do you save alive turtles for ornaments (shell) / or meat?
4. Do you save dead turtles for shell or meat?
5. Average number of days fished in a year?
6. Percent time fished.
 - A. North of Bar
 - B. South of Bar to Obregon
 - C. Campeche
 - D. Contoy Region and Isla Mujeres.

MARINE TURTLE NEWSLETTER

IUCN/SSC

No. 4

May 1977

CRISIS FOR THE ATLANTIC RIDLEY

Letter from Professor A. Carr, Co-Chairman, IUCN Marine Turtle Group
 Department of Zoology
 University of Florida, Gainesville
 Gainesville, Florida 32611
 U.S.A.

to Sir Peter Scott
 Chairman, SSC
 Slimbridge, Glos.
 England

"Dear Peter:

This is not the first time I have written you a panicky letter about the plight of *Lepidochelys kempi*, the Atlantic ridley, but it seems likely that it may be the last time. Since the IUCN last made representations to the Mexican government in respect to the plight of *kempi*, the situation has degenerated so badly that I must again beg you to bring the circumstances to the attention of the Survival Service Commission, at its April meetings. I deeply regret that I can't be there to say more on the subject, because it is a grave and complicated one.

Last week, while preparing to write a popular article on the ridley for the magazine *Sports Illustrated*, I carefully went over all available records of breeding population levels at Rancho Nuevo, the only nesting ground of the species, and I realized that we really do have a crisis on our hands. Accordingly, I went to Brownsville, Texas, for four days to gather more information. I discussed the current status of the nesting *arribada* with Pearl Adams, Kavanaugh Francis, and others of the corporation that has been formed at South Padre Island to save the ridley. I spent two afternoons with the Port Isabel shrimp fleet, the biggest shrimping exercise in the world. Going from trawler to trawler, I plied every shrimper who was willing to talk with exactly the same set of questions that I had asked at the same docks 16 years earlier, back in the days when the trawlers, their nets, and the periods for which the trawls stayed down, were all half what they are now; when the price of shrimp was one-eighth its current price; and when ridleys were being abundantly caught not just in Texas and Mexico but in Florida waters and northward all along the Atlantic coast.

On that first visit to the shrimp docks, there was evidence of incidentally caught ridleys everywhere. Every crewman I spoke with knew the ridley well. They said it was the only abundant sea turtle in the area, and they deplored the damage it did to the shrimp in their trawls. Last week, almost none of the shrimpers I spoke with even knew of the existence of ridleys. I was careful to indicate that my only interest was in collecting tags and paying rewards for them, and for the most part I was able to dispel apprehension that I might be an enforcement officer of some kind. I am thus quite sure that the contrast in catch frequencies that I saw is real; and it is just the same all along the ridley migration route in Florida and beyond. Few ridleys are caught anywhere now, simply because few remain.

Besides the hours I spent on the shrimp boats, I attended the convention of the Texas Shrimp Association, to try to soak up an impression of their attitude toward the incidental catch problem. Then I spent a long time conversing with René Marquez and others in Mexico City agencies, to get all existing figures on the size of the 1976 nesting aggregation.

What has happened to *kempi* can be graphically shown by comparing successive sizes of the Rancho Nuevo breeding population, as indicated by counts or estimates of *arribada* size during past decades. I'll list only three of these here, but the figures are

representative, and we are working up a more complete record. *Arribada* sizes, and calculated total mature breeding population for the successive periods since the nesting ground was discovered, are as shown below (I'll explain our method of converting *arribadas* to total mature population later, if desired):

<u>Year</u>	<u>Estimated Nesting Arrival</u>	<u>Total Mature Population</u>
1947	40,000	162,400
1970	2,500	10,150
1974	1,200	4,872

The figures speak for themselves. The species is clearly on the skids, and if present conditions continue it will shortly - in two years perhaps, or three, or five - be gone. The dramatic drop during the 1950's was caused by overexploitation combined with very heavy natural predation pressures. The terminal decline now in progress has been brought about by incidental trawler catch. When ridleys were many and shrimping was less intensive this factor was negligible. Today it is wiping out the species.

Lepidochelys kempi can possibly be saved, but it will surely disappear unless drastic action is taken. I hope therefore that the Survival Service Commission will be willing to write the new Mexican president, explaining the crisis and imploring him to take the only steps that could possibly save the Atlantic ridley from early extinction. I also hope you will solicit similar letters from other groups or individuals who might be willing to write. I enclose notes for the sort of letter that might be written.

Sincerely

Archie Carr
Graduate Research Professor "

EXHIBIT H

THE HABITATS, DISTRIBUTION, AND INCIDENTAL CAPTURE OF SEA TURTLES IN THE GULF OF MEXICO

Deborah A. Fuller

1978

Center for Wetland Resources
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Prepared as a working paper on sea turtles
for the Task Force developing the
Draft Shrimp Management Plan for
the US Gulf of Mexico

Predator control, primarily for raccoons, protects nests from destruction. Two years of predator control at Cape Sable, Florida, reduced nest destruction from 70% in 1964 to less than 25% in 1966 (Carr and Carr 1977).

Incidental Capture

Sea turtles are often accidentally caught during shrimp and ground fishing activities. This is a major problem along the U.S. coasts of the southern Atlantic and Gulf of Mexico (Ogren et al. 1977). An estimated 800 to 1,000 sea turtles are caught each year off the south Atlantic coast of the United States (based on Hillestad et al. 1977, Ulrich 1978). No estimates are available for total incidental captures in the Gulf of Mexico.

Carr (1972) believed incidental capture to be responsible for significant turtle mortality. Virtually all mortality is a result of drowning (Hillestad et al. 1977). Ogren et al. (1977) observed that the reactions of sea turtles when encountering a trawl increase the probability of their capture. The observed turtles did not make any sudden turns to avoid the trawl, but instead tried to outswim it. This action was often unsuccessful because the turtles could not swim at high speeds long enough to escape. The increase in oxygen consumption caused by escape attempts made drowning likely.

Species, sex and age composition of captures

Because little is known about the distribution of sea turtles and their accidental capture in the Gulf, it would be difficult to say which species, age or sex might be captured most frequently. Kemp's ridleys, loggerheads and leatherbacks are probably the most commonly captured sea turtles in the Gulf. Green turtles and hawksbills may also be taken but

the majority of their captures would most likely be restricted to the more tropical Gulf areas such as southern Florida and the Yucatan. Published sea turtle captures (Bullis and Drummond 1976, Chavez 1969, Liner 1954, Smith and List 1950) in the Gulf are illustrated in Fig. 15. Most recorded accidental captures in the Gulf are for Kemp's ridleys. Marques (1976) estimated the annual incidental catch of ridleys by United States, Cuban and Mexican shrimp trawlers at 500 turtles. Five loggerheads, 2 hawksbills and 2 green turtles were captured in Gulf waters during 26 years of offshore trawling by NMFS exploratory fishing vessels (Bullis and Drummond 1976), Fig. 15. No leatherback captures in the Gulf have been published, but in Georgia. Most leatherbacks were captured 3 to 8 km offshore (Hillestad et al. 1977).

In Port Isabel, Texas, Carr (1961) recorded that Kemp's ridley females with eggs were often captured in the spring and early summer during inshore trawling. Recaptures of adult, female Kemp's ridleys that were tagged while nesting, were made at distances of 200 m to 30 km offshore. Pritchard (1973) suggested that green turtles were more likely to be captured when leaving nesting grounds because they would be physically exhausted from months of breeding activity. Incidental capture studies of loggerheads along nesting beaches in South Carolina and Georgia showed that few adult females were captured. The majority of turtles captured were juveniles (Hillestad et al. 1977, Ulrich 1978). Eight of the 11 trawl captures in the Gulf reported by Liner (1954) were immature females.

Shrimping effort and incidental captures

The 1959-1963 average commercial shrimping efforts for the Gulf of Mexico (Osborn et al. 1969) are shown in Fig. 15. Regional shrimping efforts vary seasonally. Off the Texas and northern Mexico coast, brown

shrimp are heavily fished from June to October. The heaviest shrimping effort off the Louisiana coast, for white shrimp, is from September to December. Pink shrimp are fished year-round off the southeastern Florida coast and the western Yucatan (Osborn et al. 1969). As might be expected, the majority of reported sea turtle captures occurred in heavily shrimped areas. Management procedures aimed at reducing and/or eliminating incidental captures will most likely be focused on high interaction areas until more is known about sea turtle distribution in the Gulf of Mexico.

Interviews of shrimp fishermen in western Florida, Alabama, Louisiana Tables 2, 3, 4, and Texas (Cox and Mauerman 1976) were recently made. The catch per vessel in one year, fishing days for 1 turtle and estimated percent mortality were calculated and are presented in Table 5. Caution should be used in the interpretation of interview data. Shrimpers who do not understand why such data are being collected may be unwilling to fully cooperate and may intentionally or unintentionally bias their answers. Based on these interview data, western Florida shrimping vessels averaged a catch of approximately 6 turtles during one season or 1 turtle every 27 fishing days. This was the highest estimated capture rate of all the states in the interview. This fact is not evident from the distribution of recorded turtle captures, Fig. 15. However, recorded abundances of sea turtles off the Florida panhandle make a high capture rate plausible. Louisiana had the next highest average capture rate of 3.92 turtles per vessel in one season. At that rate a Louisiana shrimper could be expected to catch one turtle every 52.55 fishing days. The estimated overall average catch for Texas was 3.48 turtles, slightly lower than Louisiana's catch. Cox and Mauerman (1976) divided the shrimpers into those who shrimped north of Port Isabel, Texas, and those

Table 3. Estimated total effort, catch, and mortality of sea turtles captured incidentally in shrimp trawls in Florida and Texas for 1976 and Alabama and Louisiana for 1977.

State	Number of vessels	Total no. of fishing days	Average no. of fishing days	Total no. turtles caught	Number dead	Percent dead	Turtles caught per boat in one season	No. fishing days for each turtle caught
Florida	26	4,440-4,540	170-175	166-168	35-41	21-25	6.38-6.46	26.32-27.09
Alabama	21	2,218-2,228	116-117	34	7	21	1.62	71.60-72.41
Louisiana	26	5,345	206	102	24	24	3.92	52.35
Texas ¹	66	14,200	215	230	38	16	3.48	62.5

¹Taken from: Incidental catch and disposition of sea turtles by the Brownsville-Port Isabel Gulf shrimp fleet by Bruce A. Cox, Cameron County Extension Marine Agent, San Benito, Texas, and Robert G. Mauermann, Executive Director, Shrimp Association, Brownsville.

who shrimped south of Port Isabel in the offshore waters of Mexico. The seasonal catch per boat in northern waters was 5.03 turtles, slightly higher than Louisiana's average catch. Alabama shrimpers estimated the lowest annual capture rate per vessel of 1.62 turtles or 1 turtle every 72 days. Bullis and Drummond (1976) examined records of National Marine Fisheries Service exploratory offshore trawling activities along the south Atlantic, Gulf of Mexico, Caribbean and northeast coasts of South America from 1950 to 1976. They calculated a capture rate of 0.004 turtles/hour for shrimp trawls (4,670 hours total shrimp trawl effort). A slightly higher capture rate of 0.009 turtles/hour was calculated for bottomfish trawling (2,955 hours total bottomfish trawl effort). A total of 9 turtle captures were made by these vessels in the U.S. Gulf of Mexico. The catch of sea turtles per fishing day is much lower than those estimated by Gulf shrimpers or determined during south Atlantic studies. The apparent discrepancy is probably due to the fact that most turtle captures occur in inshore waters and this trawling was conducted offshore. Unfortunately a catch per day fished for Gulf waters cannot be estimated from Bullis and Drummond's (1976) paper.

The estimated mortality for Florida, Alabama, and Louisiana ranged from 21 to 25 percent. Texas shrimpers estimated their turtle mortality to be 16 percent. These probably represent a minimum mortality estimate. A South Carolina study found that mortality estimates calculated from interview data were much lower than observed mortalities (Ulrich 1978). However, dead turtles that are recaptured by trawls could bias mortality estimates upwards (Ulrich 1978).

Shrimp fishermen from Georgia estimated they caught an average of 30.7 turtles per boat in one season (Hillestad et al. 1977). Minimum

mortality was estimated to be 7.3 percent. On board observations showed a 15% minimum mortality after resuscitation efforts (Hillestad et al. 1977). South Carolina shrimpers who were interviewed estimated they caught 1 to 3 turtles per vessel per week (Ulrich 1978). Mortality rates for South Carolina shrimpers in 1976 and 1977 were 18.2 and 43.3 percent respectively (Ulrich 1978). According to interview data, Gulf of Mexico shrimpers catch fewer turtles during one season than south Atlantic shrimpers but a greater percentage of these turtles die in the trawls. This could be due to differences in: (1) concentrations of sea turtles along nesting beaches in the south Atlantic compared to general foraging in the Gulf, (2) species abundance, age, and distribution of sea turtles, (3) duration of trawling time and gear employed.

Hillestad et al. (1977) found that the number of turtles caught per vessel in one year seemed to be related directly to net width. Nets less than 41 ft (12.4 m) wide caught significantly fewer turtles than larger nets. A Spearman-Rank Correlation was performed on net widths and turtle captures reported by Alabama and Louisiana shrimpers. A positive correlation was found to exist ($P < 0.01$) between the number of sea turtles caught and net width.

Hillestad et al. (1977) believed that because of their limited activities, gear used and capture rates, noncommercial and live bait shrimpers accounted for an insignificant portion of sea turtle mortality. This is probably true for the Gulf coast, but there is no information to support or refute this.

Regulations

The leatherback, hawksbill, Kemp's ridley and Florida waters populations of green turtles have been designated as endangered species under the U.S. Endangered Species Act. The incidental capture of endangered

sea turtles by commercial fishermen is prohibited. With present technology, incidental capture of sea turtles is unavoidable short of closing down the shrimp trawling industry. Pending the development and deployment of excluder devices and designation of restricted fishing areas, the Environmental Defense Fund (EDF) suggested in a comment letter to the director of the U.S. Fish and Wildlife Service that an official statement be made with regards to enforcement policies and encouraged the use of prosecutorial discretion. Similar recommendations were made by panel members of the turtle excluder workshop at a Southeast Regional Turtle Program Meeting (Sylvester 1978). Such recommendations mean that the incidental capture of sea turtles would not be prosecuted where the fishing effort is not directed at the turtle and where turtles are returned to the sea after resuscitation efforts have been made.

The loggerhead, Pacific ridley (outside of Mexican Pacific coast waters) and the green turtle (outside of Florida and Mexican Pacific coast waters) have been designated as threatened species. The incidental capture of threatened species will be allowed provided that: (a) fishing effort was not directed at the turtle, (b) any sea turtle incidentally taken must be handled so as to avoid injury and must be returned to the sea whether alive or dead; if the turtle is alive and unconscious, resuscitation must be attempted, and (c) any incidentally taken sea turtle cannot be consumed, landed, offloaded, transshipped, or kept below deck. ~~The eventual goal of the U.S. Fish and Wildlife Service and U.S. National Marine Fisheries Service is to develop regulations based on the use of excluder panels and designation of Critical Habitat and/or Restricted fishing areas. In restricted fishing areas incidental catch may be prohibited or controlled. Controls may include such things as~~

proper gear usage, fishing methods and procedures and any other regulatory controls to reduce the incidental capture of sea turtles.

Reduction and/or elimination of incidental capture

Currently there are three methods being used or developed to help alleviate the incidental catch problem. They are: (1) excluder panels, (2) regulation of fishing effort, and (3) resuscitation efforts. Excluder panels for shrimp trawls are being developed and tested by U.S. National Marine Fisheries Service. The panel would be fitted across the mouth of a standard shrimp trawl. The U.S. National Marine Fisheries Service is attempting to develop a gear that would reduce turtle captures by 79 percent and not significantly reduce the shrimp catch. This gear will hopefully be relatively inexpensive. At the present time several excluder shrimp trawl designs are being tested along the Atlantic and Gulf coast states. No definitive results are yet available but preliminary trials along the Atlantic coast showed turtle capture to be reduced by 75 percent (Sylvester 1978).

The regulation of fishing effort has been discussed under the critical habitat and restricted fishing areas portion of the regulations section. In addition to excluder panel studies, the U.S. National Marine Fisheries Service is attempting to design new trawling methods to reduce the mortality of captured turtles.

Resuscitation of unconscious sea turtles is a method currently in use. While there has been some controversy over the effectiveness of this method Ulrich (1978) found that resuscitation and recovery periods do have merit. At any rate this procedure is now required to be performed on all unconscious threatened turtle species.

^{CWEN}
EXHIBIT J
00153

THE OCCURRENCE OF SEA TURTLES ON SOUTH TEXAS BEACHES

by

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Running Head: Sea Turtles on South Texas Beaches

ABSTRACT

A three-year survey of sea turtles on south Texas beaches indicates that turtles wash ashore most frequently in April-May and November and most often on the northern half of Padre Island and on Mustang Island. The number of strandings increased from 1976 to 1979. Loggerheads (Caretta caretta) are the most common sea turtle as evidenced by the number of turtles washed ashore on beaches and those seen around hard bottom features nearshore. The majority are subadults. Information on the strandings, occurrence, and life history of four other species in south Texas coastal waters is detailed.

INTRODUCTION

At one time, large turtles in excess of 500 lbs were commercially netted in the shallow bays near Port Aransas, Texas (Harwood and Scrivner, 1949). These were probably green sea turtles (Chelonia mydas) which still enter south Texas bays. Although sea turtles are no longer abundant enough to be commercially exploited, they are still common in the northwestern Gulf of Mexico. A large concentration of approximately 100 leatherback turtles (Dermochelys coriacea) was reported off St. Joseph's and Matagorda Islands in December 1956 by Leary (1957). The largest sea turtle nesting beach in the northwestern Gulf is that of the Atlantic ridley (Lepidochelys kempi) at Rancho Nuevo, Mexico 300 km south of the Rio Grande River (Hildebrand, 1963). Records of sporadic nesting by this (Francis, 1978) and other species have been documented for the Texas coast (Hildebrand, 1963). Loggerheads (Caretta caretta) are commonly seen in nearshore, coastal waters and frequently wash in on south Texas beaches. In 1977 and 1979, loggerheads nested on South Padre Island (H. H. Hildebrand, personal communication). Leatherbacks and hawksbills (Eretmochelys imbricata) are rare along the Texas coast.

Because of the inherent difficulty with studying sea turtles in areas where they do not nest regularly, data concerning sea turtle populations along the Texas coast are limited. Most available information is derived from turtle stranding records and occasional in situ observations. Increased interest in endangered and threatened species interaction with fisheries and lack of quantifiable data on sea turtles prompted us to obtain and consolidate data for the south Texas coast.

METHODS

The study area encompassed 208 km of the south Texas barrier island chain from Cedar Bayou to Brazos Santiago Pass and included St. Joseph's, Mustang, and Padre Islands (Fig. 1). The sandy foreshore of the barrier island beach is generally gently sloping with a landward ridge of vegetated dunes. The inner continental shelf seaward of the barrier island is predominantly a featureless silty sand bottom. Naturally occurring hard substrates on the nearshore (less than 30 m) shelf are rock outcroppings such as 9-Fathom Rock, 74-Fathom Reef and Steamers Reef (Fig. 1). Man-made, artificial structures such as jetties, seawalls, and oilfield production platforms supplement these natural topographic features.

For three years (1976-1979) data on sea turtles was compiled from our examination of stranded turtle carcasses and sightings of live turtles in coastal waters, as well as additional reports by agencies and individuals. Most observations were made by periodically driving the length of the barrier island beaches for the purpose of looking for turtles washed ashore. Personnel of Padre Island National Seashore, National Marine Fisheries Service Enforcement Division, and Nueces County Parks Department worked closely with us to provide information on stranded turtles. Additional sightings were reported by interested citizens, who either recorded the data themselves or reported sightings to us which we then examined. Persons examining carcasses and collecting data were instructed in turtle identification and provided with data forms to be completed. Information collected included species, location, sex (if determinable), straight line measurements

of carapace and head length and width, notable deformities, fouling organisms and other identifying marks. Measurements in text refer to straight line carapace length unless otherwise specified. To avoid duplication of effort by data gatherers, carcasses were disposed of behind the primary dune line.

RESULTS

Two hundred fifty-nine (259) sea turtles of 4 species were recorded in the study area from September 1976 through September 1979. Turtles were most frequent in April-May and November (Fig. 2) when 58% and 13%, respectively, of the total strandings for all 3 years occurred. The number of turtle strandings increased through the 3 years. In 1976, 21 turtles were observed in the last 4 months of the year. Turtle observations increased to 26 for 1977, 100 for 1978, and 112 for the first 9 months of 1979. For the period September-August, numbers of turtles increased from 41 to 69 to 149 for each of the three years.

Sea turtles most frequently washed ashore on North Padre Island (30.5%) and the Little Shell and Big Shell beaches of Padre Island (29.0%) (Fig. 1). Lesser numbers occurred on Mustang Island beaches (18.2%), the area of Padre Island north of Mansfield Pass (8.9%), South Padre Island (7.3%), St. Joseph's Island (4.3%), and the Upper Laguna Madre, Corpus Christi Bay and Aransas Bay (1.9%).

The most often recorded species was the loggerhead (202 individuals). Loggerheads were found during all months except January and February and were most abundant in April-May and November (Fig. 2). The average carapace length was 70 cm and ranged from 50.5 to 92.5 cm (Fig. 3). The majority measured (98%) were smaller than the size

reported by Billestad, Richardson and Williamson (1978) for adult potentially breeding loggerheads (76 cm) stranded on Georgia beaches. Eight percent (8%) were larger than the smallest nesting loggerhead (81 cm) reported by Ehrhart and Yoder (1978) from Merritt Island, Florida. One male (82 cm) was reported in April 1979.

The high frequency of stranded loggerheads was paralleled by the number of live individuals seen in shallow, offshore areas near hard substrates. Loggerheads were commonly seen near offshore oil platforms, natural rock reefs, and rock jetties in the study area. Loggerheads are carnivorous (Carr, 1952) which may account for their occurrence near hard bottom features. Stomach contents were not analyzed regularly during the study, but were sometimes examined inadvertently when a specimen had decomposed to the point that the contents of the stomach spilled out onto the ground beneath it. Spines of sea urchins, a hard substrate inhabitant, were commonly present. One autopsied specimen contained Sargassum seaweed, bird feathers, and pieces of a plastic bottle in its gut (B. Fuls, personal communication).

Fifteen Atlantic ridleys were counted. Six of these were hatchlings (4.6 to 7.6 cm). Seven, according to the size categories of Carr (1952), were preadult (14.3 to 31.9 cm), and two were adults (62 and 66 cm). Francis (1978) reported hatchlings from ridley nests on South Padre Island in May 1974 and July and August 1976. One ridley nested on North Padre Island in June 1979. During our 3-year survey, hatchlings washed ashore in July 1979, August 1977 and 1979, and early September 1979. Preadults were found in April-May and September-October; and the adults, in October.

Ten green sea turtles were found. Three (29.8 to 34.0 cm) were reported from coastal bays and lagoons. One (88.9 cm) was stranded on the Mustang Island beach less than 1 km from Aransas Pass Inlet, and one hatchling (7.6 cm) washed in on North Padre Island. During 22-31 August 1979, five juvenile greens (20 to 21 cm) washed ashore on Padre and Mustang Islands. All were heavily fouled with oil, which may have contributed to their deaths.

One leatherback, approximately 150 cm, was observed floating dead off the Aransas Pass Inlet jetties in May 1977. No hawksbills were collected in the study but there have been reports of this species occurring in south Texas waters. Four hawksbills (less than 20 cm) have been reported live off the Aransas Pass Inlet jetties in late summer from 1970 to 1975. Thirty-one carcasses were not identified to species.

DISCUSSION

The increase in the number of sea turtle strandings through the 3-year study may be an artifact of increased sampling effort, but it is felt by the authors and the persons who helped collect the data that a real increase in strandings did occur in 1978 and 1979. No definite cause for these strandings was established but an increase in trawling activity in nearshore waters during periods of the highest incidence of strandings may reinforce the view presented by Hillestad et al. (1978) that shrimp trawlers figure heavily in the premature death of many sea turtles. The greater frequency of turtle strandings along certain portions of the coast (Little Shell and Big Shell beaches of Padre Island, North Padre Island, and Mustang Island) may substantiate

this view since increased trawling activity in nearshore waters was documented in these areas when turtle strandings were occurring. However, differences in sampling effort and the influence of longshore and nearshore currents may also account for some of the locality-related differences in numbers of turtle strandings.

Loggerheads were the common sea turtles on the south Texas coast. The majority of these were subadults. Mature loggerheads may, in fact, be rare in this portion of the Gulf of Mexico. Atlantic ridleys were the second most common species but their occurrence was still infrequent. The occurrence of ridley hatchlings on area beaches was probably due to the close proximity of the nursery area at Rancho Nuevo, Mexico, the sporadic nesting of ridleys on Padre Island, and the recent efforts of Mexican and United States wildlife agencies to manage this endangered species. The beach stranding data indicates that juvenile greens may spend a portion of their lives in the open northwestern Gulf of Mexico. Hawksbills and leatherbacks were rare along the south Texas coast.

ACKNOWLEDGMENTS

We wish to thank personnel of Padre Island⁸ National Seashore, R. G. Whistler, J. Woods and R. Harris; and enforcement agent, E. Smith, of the National Marine Fisheries Service for collecting and reporting turtle data to us. R. Barrus and J. Shaw provided numerous turtle reports, as well as many others who relayed information to us on sea turtles. The manuscript benefitted from the review of University of Texas Marine Science Institute Contribution No. 000.

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Figure 1. Location of study area and number of stranded sea turtles recorded by distance along south Texas beaches (1976-1979).

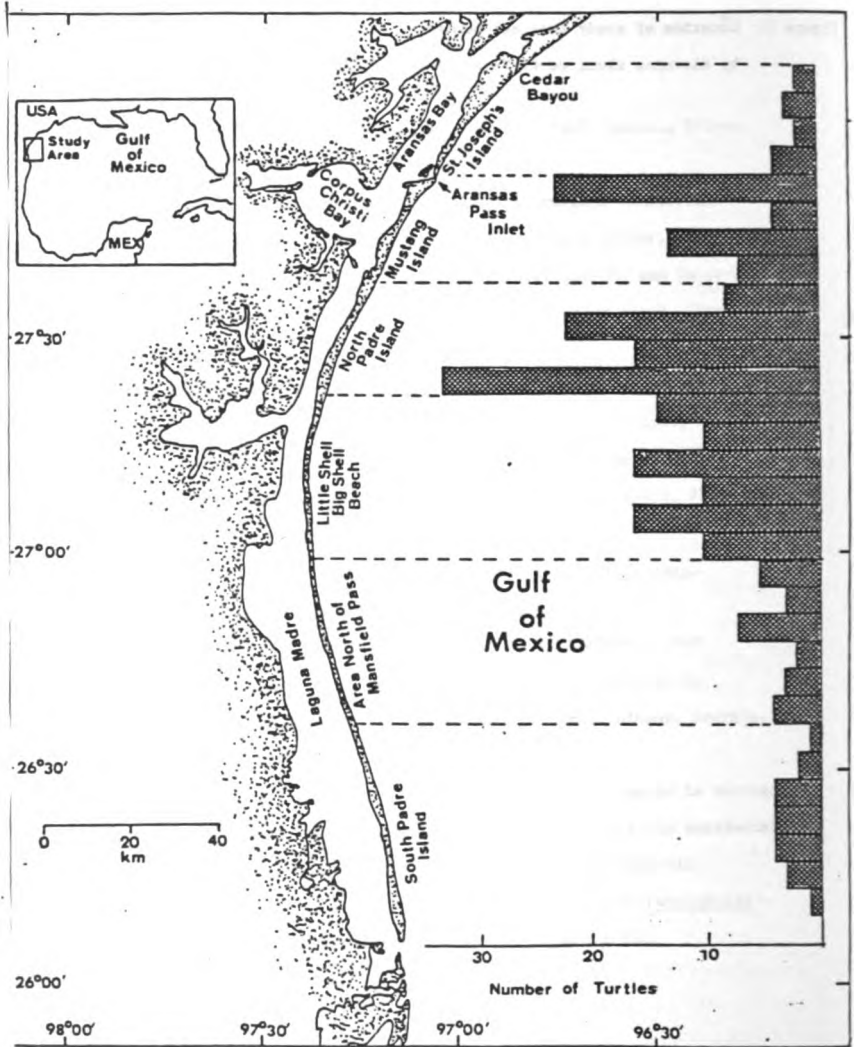
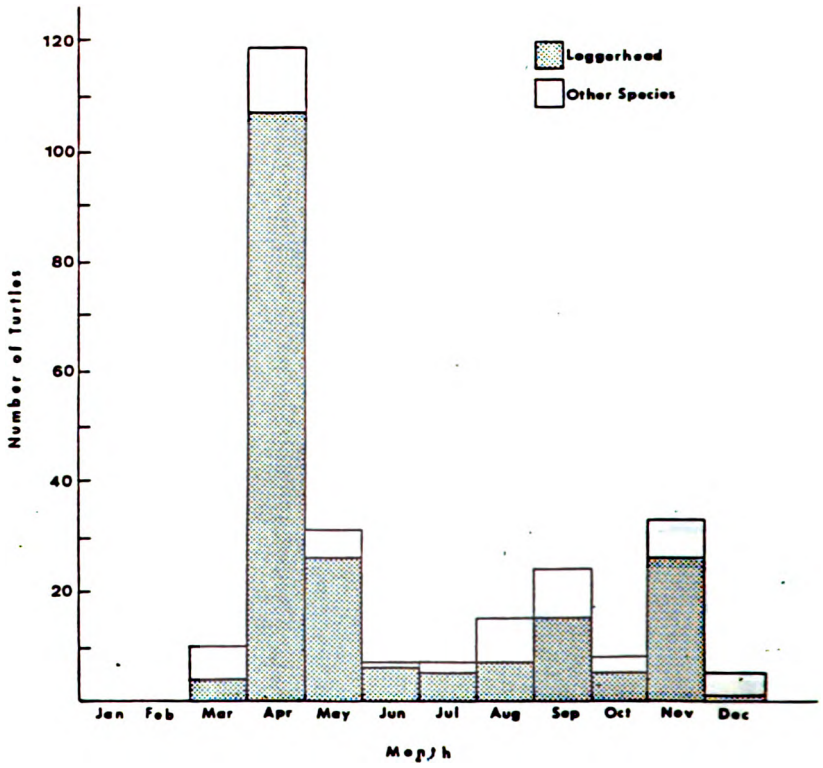


Figure 2. Number of stranded sea turtles recorded by month for 3 years (1976-1979) on south Texas beaches.



EXHIBIT

VI.2. Overview of Distribution of Juvenile and Sub-Adult Kemp's Ridley Sea Turtle: Preliminary Results from the 1984-1985 Survey.

by

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Panama City, FL 32407

Juvenile life stages of Kemp's ridley sea turtle are widely distributed throughout the coastal waters of the United States from Texas to New England. For the most part, these individuals could be described as post-pelagic "yearlings" that have left the epi-pelagic, first year habitat, for the nearshore benthic habitat to forage primarily on motile forms of crustaceans such as portunid crabs. Historical records from the turn of the century characterize the ridley as a common inhabitant of North Carolina bays and estuaries. Kemp's ridley was the second most abundant sea turtle caught in the Cedar Key, Florida, turtle fishery, but this may reflect the bias of the fishermen for the green sea turtle.

Following the drastic decline in the size of the Rancho Nuevo, Mexico, rookery over the past several decades, a similar decrease in numbers of juveniles and sub-adults in our coastal waters would be expected. Preliminary surveys conducted in the northern Gulf of Mexico substantiate that this is the case. However, remarkable occurrences of unusual numbers of juvenile ridleys captured in relatively restricted areas have been recently reported in Louisiana, Alabama and, to some extent, in northwest Florida. In two cases, the most significant biological factor associated with these frequent captures was the abundance of portunid crabs. In some cases, cold-stunned individuals were obtained from both coasts of Florida following episodes of severe winter temperatures. All records of ridleys collected or observed, weighed and measured, and tagged and released are presented. Anecdotal information from various informants and miscellaneous observations are summarized. Problems associated with collecting sufficient data to make population estimates are discussed. Capture methods are described and their efficacy rated according to size of turtle captured and habitat zone sampled.

Kemp's Ridley: A Preliminary Survey and Census

Abstract

Kemp's ridley sea turtle habitat and census survey revealed that the smallest size (age) classes found in the U.S. are primarily located in the northern Gulf of Mexico coastal waters. This species ranges from Mexico to New England and eastward to Europe and the eastern Atlantic. For the most part, these wide ranging Atlantic individuals are immatures--with the adults restricted primarily to the Gulf of Mexico, although a few larger adult-sized individuals have been found along the Atlantic coast of Florida. Historically, the smallest ridleys (<25 cm carapace length) were reported only from New England in the European waters and the east Atlantic area in the vicinity of the Azores. The small turtles found in the Gulf of Mexico probably represent the "yearling" age class and are post-pelagic migrants to the shallow water habitat of bays and estuaries. This suggests that the entire life cycle is completed in the Gulf of Mexico, but some portion of the immature population migrates or is passively carried to the Atlantic. The Atlantic expatriates that are frequently found stranded on beaches in the more northern latitudes, are probably killed from exposure to low winter temperatures. However, recapture data from ridleys tagged in the SE United States suggests they move north to Georgia, the Carolinas, and Virginia in the summer, and south to the Cape Canaveral region of Florida in the winter. Perhaps, those ridleys reported from southern European waters and the Azores are survivors of the transatlantic crossing and eventually return to the Gulf of Mexico to breed. However, if this is the case, we do not know the routes the eastern or the western Atlantic ridleys take to return to the gulf to breed and nest at their Mexican rookery.

Summary

Juvenile/subadults distributed along entire coast of U.S. from Texas (Laguna Madre) to Massachusetts (Cape Code Bay). Quantitative aspects are lacking (Tables 1-4). ✓

Smallest size class "yearlings" (<25 cm) found mostly in Gulf coastal states bays and estuaries from Texas to NW Florida. A few have been reported from New England. Evidence for completion of entire life cycle within the Gulf of Mexico presented (Tables 2-4).

Atlantic "population" composed in part of waifs as well as individuals that overwinter, survive, migrate north in winter and south in summer, and probably return to Gulf to breed by routes unknown to us (Figure 1). ✓

Distribution of ridleys along coastal U.S. strongly correlated with areas abundant in portunid crabs (from Chesapeake Bay to Sabine River offing and Corpus Christi Bay, Texas); Kemp's ridley primary prey species. These areas include blue crab nursery grounds, i.e., shallow seagrass beds and shallow mud bottom bays of coastal marshes, two distinct types of marine habitats. ✓

Periodic episodes of large numbers of juveniles being captured incidental to trawling efforts have been reported since mid-1970s. They are: (1) Sabine River offing--Sea Rim State Park, Texas; (2) Terrebonne Parish, Caillou Bay, Louisiana; and (3) Big Gulley, adjacent Mobile Bay offing. These episodes may have been unusual in that they are thought to be correlated with a high density of blue crabs resulting in a concentration of foraging ridleys. These events are not necessarily regular occurrences but are highly intermittent events, i.e., unpredictable at the present time. ✓

In summary, the coastal shallow waters of the Gulf of Mexico are the primary habitat for Kemp's ridleys throughout the year. On the Atlantic coast, coastal habitats as far north as Massachusetts are utilized by ridleys during the summer months. The New England "population" frequently succumbs to cold temperatures in November-December; others occurring below Cape Cod apparently migrate south to Florida to overwinter. ✓

We do not have good quantitative information at this time to delineate areas of abundance or incidental occurrence. However, the preliminary findings, albeit qualitative, suggests the Gulf coast from Port Aransas, Texas, to the Appalachicola River, Florida, and then south to Cedar Key, is the primary habitat for subadult ridleys. Historically, Florida Bay, should also be identified. ✓
On the east coast of the U.S., ridleys are apparently common from Cape Canaveral north to Chesapeake Bay, but found inshore only during spring-summer-fall north of Florida (c. 29°N , or at the 20°C isotherm). During the winter months, they migrate south or offshore to warmer waters. Cape Canaveral inshore area hosts ridleys during winter months. ✓

Table 1. Kemp's ridley size/seasonal distribution: Atlantic.

Locality	Date	Number	Carapace length (cm)	Source
Cape Cod Bay, MA	1942	6	$\bar{x} = 37.5$ (R = 24-52)	Dodge (1944)
Cape Cod Bay, MA	1978 (Nov)	7	$\bar{x} = 30$ (R = 37-33)	Lazell (1978)
Sandy Hook Bay & New York Bight	1973-75 (Jun-Nov)	7	$\bar{x} = 35.6$ (R = 26.5-43)	Azarovitz (Unpub.)
Chesapeake Bay	1979-81 (May-Nov)	21	$\bar{x} = 41$ (R = 27-62) ^{1/}	Lutcavage and Musick (1985)
Chesapeake Bay	1985 (May-Nov)	-	$\bar{x} = 39$ (R = 30-45)	Byles (1985)
South Carolina and Georgia	1978-83 (Jun-Nov)	21	$\bar{x} = 34.8$ (R = 20.3-57.2)	NMFS Surveys
Cape Canaveral Florida	1978-84 (Dec-Mar)	40	$\bar{x} = 38.6$ (R = 24.1-66)	NMFS Surveys
Indian River- Mosquito Lagoon	1976-81 (Sep-Jan)	3	$\bar{x} = 48.9$ (R = 55-62.8)	Ehrhart (1983)

^{1/} Curved carapace length

Table 2. Kemp's ridley size/seasonal distribution: Gulf of Mexico

Locality	Date	Number	Carapace length (cm)	Source
Cedar Key, FL	1955 (Apr-Nov)	72	$\bar{x} = 53.5$ (R = 38-64) ^{1/}	Carr and Caldwell (1956)
Wakula/Franklin Co., FL	1970-85 (Mar-Jan)	30	$\bar{x} = 35.5$ (R = 20.3-55.9) ^{2/}	Rudloe/PIMS- NMFS
Sea Rim State Park, TX	1983-85 (Apr-Nov)	61	$\bar{x} = 32.3$ (R = 20.3-45.7) ^{3/}	Dameron, TX Parks and Wildlife
Louisiana/Texas	1978-83 (Mar-Nov)	6	$\bar{x} = 31$ (R = 24.1-39.8) ^{4/}	NMFS Surveys

^{1/} Fishing gear bias: 1 specimen 26 cm

^{2/} 23% <25.4 cm

^{3/} 21% <25.4 cm

^{4/} 1 specimen 65.5 cm

Table 3. Additional documented records of Kemp's ridleys: Gulf of Mexico (NMFS data).

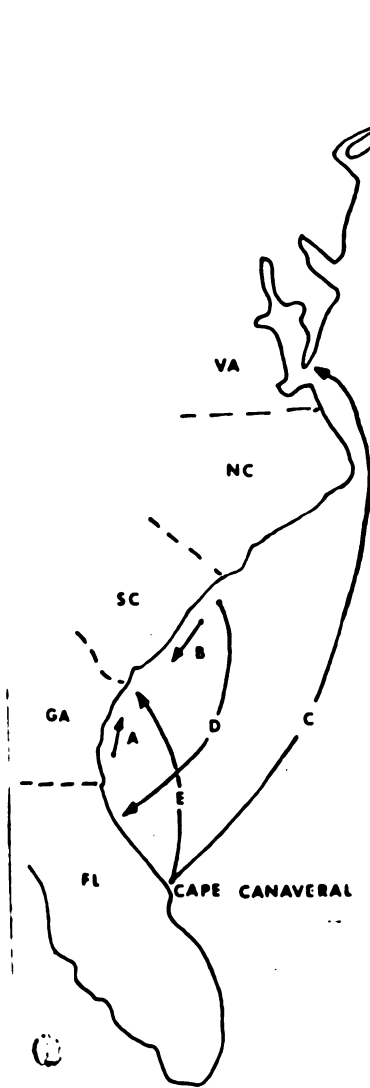
Locality	Date	Carapace length (cm)
Cedar Key, FL	1984-85 (Aug, Oct)	43.6, 49.3
St. Joseph Bay, FL	1982 (Feb ^a , Apr)	25, 43.2
Fort Walton, FL	1956 (Feb, May, Jul)	21.3, 35.8, 38.1
Dauphin Island, AL	1966-83 (Feb-Oct)	N=7, \bar{x} =31 (R=25.8-39)
Biloxi, MS	1984 (Jun)	22.8, 25.4
Lake Borgne, LA	1983-84 (May, Jun)	24, 26.6
Grand Terre, LA	1984 (Jul)	21, 29.5
Terrebonne Bay/ Caillou Bay, LA	1984 (Jun)	N=5, \bar{x} =23.7 (R=21.6-26.3)
Sabine Lake, LA	1985 (Jul)	24.1

Table 4. Recapture records of adult females^{1/} in Gulf of Mexico coastal waters by state (personal communication Rene Marquez, 1978)

Florida	1	
Alabama	1	
Mississippi	3	
Louisiana, Eastern Parishes	4	
Louisiana, Mississippi River Delta	6	
Louisiana, Western Parishes	18	✓
Texas	6	

Nt = 39, size R = 59.5-75 cm

^{1/} Tagged at Rancho Nuevo, Mexico, 1966-76



	<u>Tagged</u>	<u>Recaptured</u>
A	August 1978 324 days/29 nautical miles	July 1979
B	June 1979 445 days/39 nautical miles	September 1980
C	February 1981 202 days/562 nautical miles	August 1981
D	October 1983 61 days/200 nautical miles	December 1983
E	February 1984 173 days/102 nautical miles	May 1984

Figure 1. Coastal Migrations

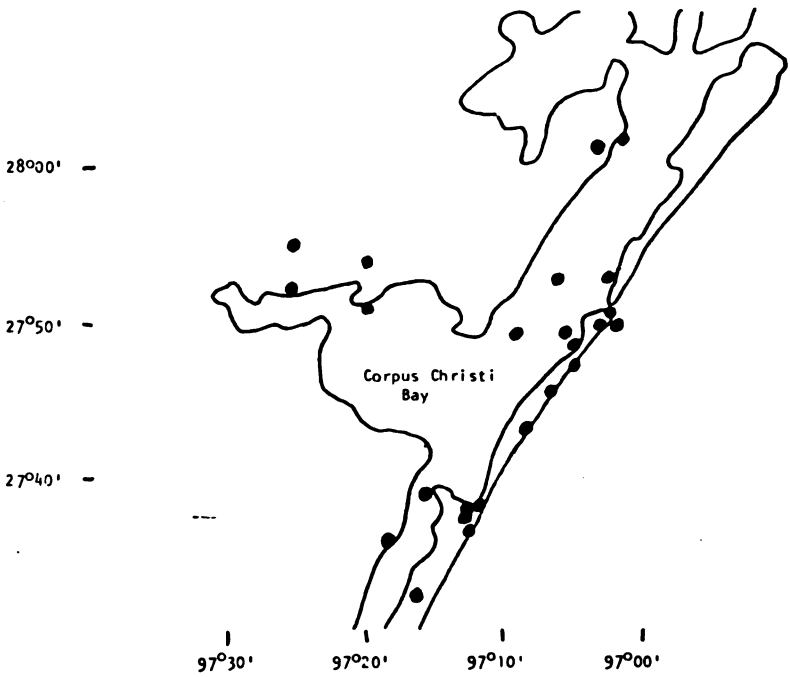


Figure 2. Kemp's ridley strandings in Corpus Christi Bay area (NMFS STSSM data).

Figure 8

METHOD OF RECAPTURE OF KEMPS RIDLEY FEMALES
TAGGED AT RANCHO NUEVO, MEXICO (1966-1985)

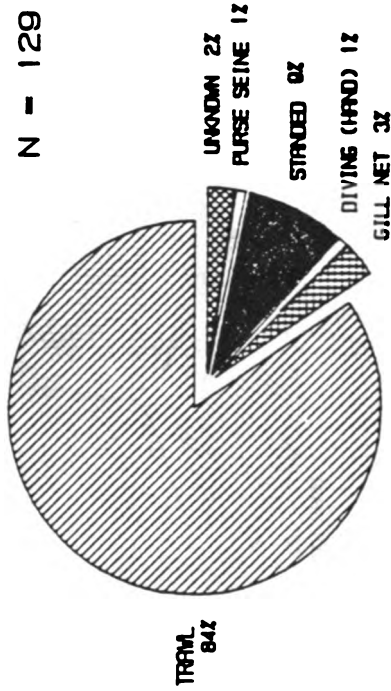
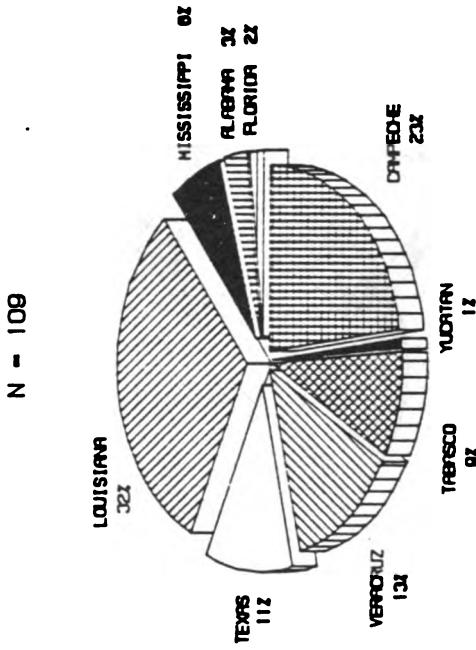


Figure 7

LONG DISTANCE TAG RETURNS OF KEMPS RIDLEY FEMALES
TAGGED AT RANCHO NUEVO, MEXICO 1986-1984



(MARQUEZ ET AL., 1978; MARQUEZ, IN PREPARATION)

EXHIBIT N

REPORT ON REPUBLIC OF MEXICO/UNITED STATES OF AMERICA
CONSERVATION EFFORT ON BEHALF OF KEMP'S RIDLEY SEA TURTLE
AT PLAYA DE RANCHO NUEVO, TAMAULIPAS, MEXICO, 1986

Work conducted under overall direction and in cooperation
with INSTITUTO NACIONAL DE LA PESCA, MEXICO, D.F.
SECRETARIA DE PESCA, 1986 PERMIT NO. 150486-333-01-0750
ISSUED 16 APRIL 1986 AND U.S. FWS PERMIT NO. PRI-689914

The donation of eggs to the U.S. Fish and Wildlife Service
was under the auspices of SECRETARIA DE RELACIONES
EXTERIORES DIPLOMATIC NOTE NO. 301312

Prepared by:

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KEMP' RIDLEY POPULATION DATA FROM
RANCHO NUEVO, TAMAULIPAS, MEXICO
1978 - 1986

YEAR	TURTLES TAGGED OR RECAPTURED	NESTS COLLECTED	EGGS COLLECTED	HATCHLINGS	HATCH SUCCESS	HATCH EXCLUDING DROWNED NESTS
1978	251 ¹	834 ¹	85,217 ¹	48,009 ¹	56.3 ¹	—
1979	414 ²	954 ²	98,211 ²	63,996 ²	65.2 ²	—
1980	295 ³	796 ⁴	82,374 ⁴	37,378 ⁴	45.37 ⁴	50.75 ⁴
1981	228 ⁵	897 ⁵	89,906 ⁵	53,282 ⁵	59.26 ⁵	66.29 ⁵
1982	284 ⁶	750 ⁶	77,745 ⁶	48,007 ⁶	61.0 ⁶	—
1983	297 ⁷	746 ⁷	77,432 ⁷	32,921 ⁷	45.0 ⁷	73.0 ⁷
1984	264 ⁸	798 ⁸	80,798 ⁸	58,124 ⁸	72.0 ⁸	—
1985	212 ⁹	677*	67,633	51,033	75.5 ⁹	—
1986	218 ¹⁰	672**	65,258 ¹⁰	48,950 ¹⁰	75.01 ¹⁰	—

¹Information from Pritchard, P.C.H., 1978. Final report, U.S. Fish & Wildlife Contract #14-16-022-78-055.

²Information from Pritchard, P.C.H., 1979. Final report, U.S. Fish & Wildlife Contract #14-16-0002-80-2.

³Figure derived from field notes of Ms. Carol Woody.

⁴Information from Pritchard, P.C.H., 1980. Final report, U.S. Fish & Wildlife Contract #14-16-0002-80-216.

⁵Information from Hurchfield, P.M. and Woody, Jack, 1981. Final report, U.S. Fish & Wildlife, Contract #1.

⁶Figures derived from the field notes of Noyes, P.T., 1982.

⁷Figures derived from the field notes of Noyes, P.T., 1983.

⁸Figures derived from the field notes of Charles Spitzner and Karen Newman Spitzner, 1984.

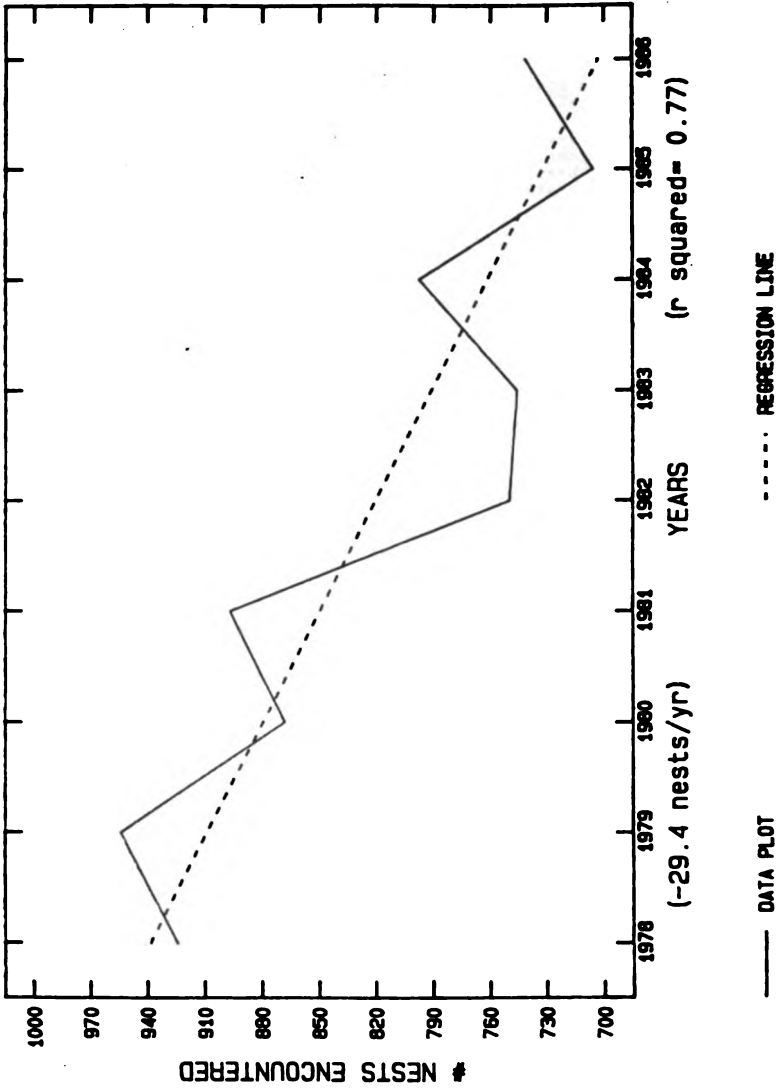
⁹Figures derived from the field notes of Charles Maley, Carlos Hasbun, Janine Lombardi & Lynn Corliss. This figure is a low estimate in that the number of hatchlings for thirteen of the nests is not available.

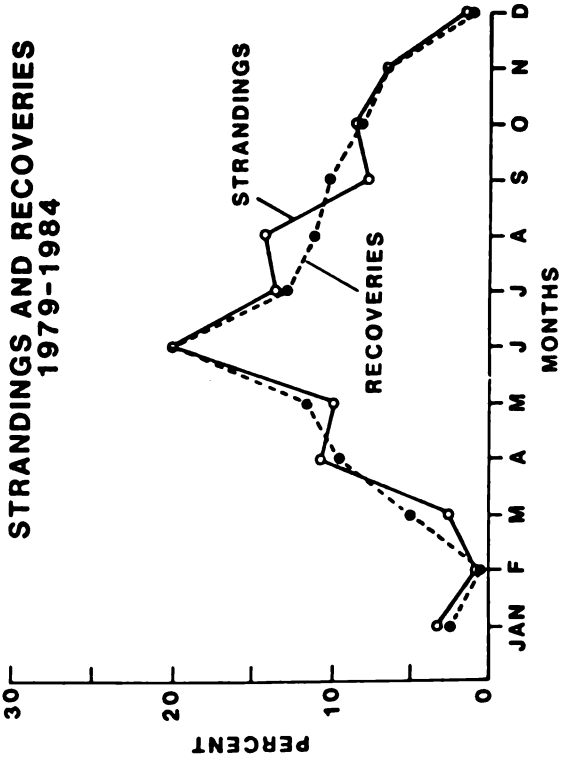
¹⁰Figures derived from the field notes of Elaine Christens, Mariel Campbell, Michael Sanford and Carlos Hasbun.

* 677 *L. kemp* nests plus an additional 29 predated nests were accounted for. Ninety-five additional crawls wherein no nest was evident or located were recorded.

**672 L. kempi nests plus a minimum 40 to maximum of 60 nests were taken by egg thieves. Twenty additional nests undiscovered at time of oviposition were predated by coyotes and subsequently recorded. The hatchling data for 484 eggs (5 nests) laid in August, incubated at Rancho Nuevo in styrofoam boxes, is not yet available and is not reflected in hatchlings or hatch success totals.

1978-1986 RIDLEY NEST TRENDS





GEOGRAPHICAL DISTRIBUTION OF RECOVERIES

YEAR-CLASS

	1978	1979	1980	1981	1982	1983	TOTAL
MEXICO			3	2			5
TEXAS	4		56	18	140	6	224
LOUISIANA	3		17	17	9		46
MISSISSIPPI	1	1	2	1			5
ALABAMA	1			3			4
FLORIDA (WEST)	10	8	2	1			21
FLORIDA (EAST)	19	3		2			24
GEORGIA	6		1	1			8
S. CAROLINA	9	1	1	1			12
N. CAROLINA	16	1	1				18
VIRGINIA	2						2
MARYLAND	2						2
DELAWARE							0
NEW JERSEY	1	1					2
NEW YORK	1		1				2
CT-MA							0
FRANCE		1					1
MOROCCO		1					1
TOTAL	75	17	84	46	149	6	377

* ONE WITH ERRONEOUS LOCATION IS NOT LISTED

RECOVERY LOCATIONS

	YEAR-CLASS							TOTAL
	1978	1979	1980	1981	1982	1983		
BAY/RIVER/ESTUARY	18	3	24	8	24	0	77	
OPEN WATER	14	3	19	12	17	1	66	
OUTSIDE BEACH	5	0	9	6	38	3	61	
CHANNEL/PASS/INLET	9	2	8	5	11	2	37	
INSIDE BEACH	0	1	0	1	6	0	8	
OTHER	1	4	3	1	1	0	19	
UNKNOWN	28	4	22	13	43	0	110	
TOTAL	75	17	85	46	149	6	378	

METHODS OF RECOVERY

	YEAR-CLASS							TOTAL
	1978	1979	1980	1981	1982	1983		
SHRIMP TRAWL	12	0	33	21	16	0	82	
FOUND DEAD	5	3	8	7	35	1	59	
BY HAND	2	4	5	1	5	2	19	
HOOK AND LINE	3	1	10	1	1	0	16	
GILL NET	7	0	0	1	3	0	11	
CRAB TRAP	1	0	0	0	0	0	1	
OTHER	9	5	2	3	61	1	81	
UNKNOWN	36	4	27	12	28	2	109	
TOTAL	75	17	85	46	149	6	378	



Center for
Environmental
Education

EXHIBIT 0

17 December 1985

Jack Brawner, Director
National Marine Fisheries Service
9450 Roger Boulevard
St. Petersburg, FL 33702

Dear Jack:

Thank you for your most recent letter and for participating in the recent TED meeting. You, your staff, and the Fisheries Center Staff provided important information that will be useful in the coming months.

On the basis of the meeting and other information, I have come to the conclusion that the shrimping industry, NMFS, and the environmental community, insofar as I can speak for it, have some basic disagreements that have not been openly confronted. I am writing now to set out for you as clearly as possible the way the Center for Environmental Education (CEE) views the incidental capture of threatened and endangered species of sea turtles in shrimp trawls. I hope you will bear with this rather extensive, although not exhaustive, review of these issues.

The Problem

Sea turtle populations of five species of sea turtles found in U.S. waters have been reduced to such an extent that they have been listed as threatened or endangered under the Endangered Species Act (ESA). For more than a decade, the federal government has acknowledged that incidental capture and drowning in shrimp trawls has been a significant source of mortality for all sea turtle species in U.S. waters. NMFS has estimated that each year more than 45,000 sea turtles are captured in the shrimp fishery and that of these more than 12,000 drown.

When the Kemp's ridley sea turtle was listed as endangered under the ESA in 1970, incidental drowning in shrimp nets was identified as one of the principal threats to the continued existence of the species. In 1973, Marquez and Pritchard concluded a paper for the IUCN by saying:

Probably the most serious problem of all, however, and the hardest to control, is the accidental capture and drowning of ridleys in shrimp trawls, and to a lesser extent, shark nets, particularly as they migrate to and from the nesting grounds.

Whale Protection Fund • Seal Rescue Fund • Sea Turtle Rescue Fund • Marine Habitat Program

624 9th Street, NW Washington, DC 20001 (202) 737-3600

Little has changed since then except that there are fewer adult females to drown as the population has continued to decline despite more than eight years of intensive conservation efforts at the ridley's nesting beaches in Mexico. As you have noted, the impact shrimp trawlers have on sea turtle populations is not disputable.

While most attention has been focused upon the by-catch of threatened and endangered sea turtles, the by-catch and loss of finfish and other marine life in shrimp nets cannot be ignored. Each year the Gulf of Mexico shrimp fishery catches and discards more than one billion pounds of groundfish of commercial and recreational importance. It is estimated that on the average nine pounds of finfish are caught and discarded for every one pound of shrimp caught and kept.

As you intimated in your recent letter to Fish and Wildlife Service Regional Director Michael Spear, one of the purposes of the Magnuson Fishery Conservation and Management Act is to promote the development of the Nation's marine fisheries. However, the Act is equally explicit that conservation and management measures must, where practicable, promote efficiency in the utilization of fishery resources. Requiring use of the TED is consistent with this national standard with respect to sea turtles and groundfish. Indeed, failing to require use of a practicable technology like TED flies in the face of this standard. The management measures included in the current Gulf of Mexico shrimp fishery management plan are inadequate at least in this respect.

Research on the Turtle Excluder Device

Much to NMFS' credit, the agency undertook a gear research program in 1977 which has spent more than \$14 million in perfecting gear that will eliminate the incidental drowning of sea turtles while maintaining shrimp catch. Interestingly, the early years of research led to several unanticipated findings. First, by examining how nets caught turtles, NMFS scientists were able to identify modifications to shrimp nets that have benefited the industry. Second, it was discovered that if nets are fished for no more than 90 minutes, the drowning of sea turtles can be reduced by 90 percent.

At a September 1980 meeting in Charleston, South Carolina, NMFS staff described a new piece of gear which was much more effective in excluding sea turtles and maintaining shrimp catch than the excluder panel, which had been the initial focus of the gear research program. Most conservationists believed that we were on the verge of having a solution to the incidental capture problem that did not involve regulating fishing activities. Further NMFS research refined the turtle excluder device (TED) so that it was completely effective in eliminating the drowning of sea turtles and it actually increased shrimp catch by up to seven percent. CEE sponsored an economic cost/benefit analysis on the use of the device which showed that the larger vessels would increase

their profits by thousands of dollars if they were to use TEDs.

Responding to complaints from fishermen, NMFS continued modifying the TED by making it lighter and less bulky. By September 1984, NMFS had developed a TED that met the original design specifications and more, since the latest TED reduces by-catch of finfish significantly.

The TED works, Jack. It was clear at the most recent TED meeting that the TED does several things very well:

- o it eliminates the drowning of sea turtles while maintaining shrimp catch, which is the original goal of the research program;
- o it reduces finfish by-catch by 50-70 percent thereby reducing the waste of over one billion pounds of discarded finfish in the Gulf of Mexico alone;
- o it substantially reduces the by-catch of other marine life;
- o by reducing by-catch, the TED maintains the quality of shrimp caught; and,
- o it is lightweight and relatively easy to use.

The incidental capture and drowning of sea turtles is a problem. The TED is a solution. So what is the problem?

The Voluntary Program

At the September 1980 meeting of representatives of industry, government, and conservation organizations in Charleston, South Carolina, representatives of the environmental community agreed to forego pursuing regulations requiring reduced trawl times, which research indicated would nearly eliminate the drowning of sea turtles in shrimp trawls. The environmental community was persuaded by assurances from industry that it would voluntarily reduce tow times and from NMFS that a new piece of gear, the TED, would soon provide a solution beneficial to both shrimp fishermen and sea turtles. At a later scoping meeting called for the development of draft supplemental environmental impact statement, NMFS said that it would prepare regulations requiring the use of this device once the device was practical. Soon afterwards, however, NMFS said that it would pursue a voluntary approach and would prepare regulations requiring the use of the TED in the event that the voluntary approach did not work.

Based upon these assurances, CEE and other environmental organizations have consistently pursued a voluntary approach to reducing sea turtle drownings while we awaited further improvements in gear or for the word to get out to shrimp fishermen about the TED or for the device to be perfected in this or that manner. We have relied upon assurances that the TED's other benefits, such as reduction of finfish and jellyball by-catch, would sell the device. I believe that we have made a good faith effort to promote the use of the device.

Indeed, recognizing that limited governmental and other resources required focusing technology transfer efforts to areas where the most immediate effect might be achieved, I suggested investigating the use of Section 10(a) of the ESA two years ago to encourage the reporting of sightings or capture of endangered Kemp's ridleys. I was assured that the General Counsel's office of NOAA would be formally consulted and that the agency would take action. Nothing has happened. NMFS has not even prepared draft Section 10(a) implementing regulations for review by NOAA, much less the Department of Commerce, or the Office of Management and Budget, or the interested public.

NMFS staff have expressed reservations to me about how Section 10(a) might work in this situation. Besides the fact that many of these reservations are matters of opinion that reflect a lack of understanding of Congressional intent regarding the 1982 amendments to the ESA, we are not even at the stage of talking about specific permits or conservation plans since NMFS does not have implementing regulations. Even if NMFS chose to issue a Section 10(a) permit, it couldn't do so without implementing regulations or risking a legal challenge. NMFS has quite simply chosen not to implement the 1982 amendments. To my knowledge, NMFS does not have the authority to pick and choose which parts of the ESA it implements.

I had suggested this approach believing that it might provide a means for resolving a conflict and for phasing in the use of the TED in a fashion that would allow the industry some control over how the problem was solved. We, at least, would have some concrete basis for believing that some segments of the shrimping fleet were committed to making progress in meeting the standards of the ESA and eliminating the incidental capture of endangered sea turtles. The informal and rather offhanded dismissal of this approach by NMFS is irresponsible in my view.

As it is, NMFS is including some shrimp fishermen under its general research permit, allowing them legally to capture endangered species of sea turtles, to tag them, and to release them. While this may provide information of some use, this artifice provides no incentive for these or other shrimp fishermen who might reasonably expect to be included under the NMFS permit to use the TED. Indeed, the way in which NMFS decided to provide these permits and the permitting actions themselves are of questionable legality.

Our Goals

While NMFS, the industry, and the environmental community may share the general goals of eliminating the incidental drownings of sea turtles without undue economic cost to the industry, we differ on important specifics. So that you understand CEE's position on these matters, I would like to dwell a bit on them.

First, our ultimate goal is the use of the TED at all times wherever sea turtles might be incidentally caught. At one time we were willing to focus on problem areas, but the lack of action in identifying those problem areas makes it unlikely that this is a practical management approach. Use of the TED only when finfish or jellyballs are abundant is insufficient, particularly in light of the fact that the TED can eliminate sea turtle mortality if it is used.

My strong impression from the most recent TED meeting is that neither NMFS nor the shrimp industry shares a goal of 100 percent use 100 percent of the time wherever sea turtles might be captured. Indeed, the reluctance to set any kind of target at all simply drove this home. As it is, the Strategic Plan for the Southeast Region of NMFS includes a milestone which you did not mention in the meeting: "sea turtle mortality by U.S. shrimp reduced by 50% by 1990. This bears no relation to the target set at the November 1983 TED meeting—50 percent use by November 1986—, nor to the NMFS' environmental assessment of the voluntary program itself. CEE was never given the opportunity to provide its views on the Region's Strategic Plan nor was the TED working group, although I understand that industry organizations are quite often given that opportunity together with fishery management councils. As you know, the NMFS Strategic Plan is the agency's principal planning document, upon which the budget, senior executive service contracts, and MUO's of NMFS staff are built. As such, it represents the agency's formal intentions. The agency and region's plans regarding the incidental drowning in the shrimp fishery do not reflect CEE's views or those of the environmental community in general, I suspect, much less NMFS' responsibilities under the ESA. Whether intentional or not, this deception has undermined our ability to determine how we might effectively work cooperatively in achieving our shared goals.

I don't believe that anyone can reasonably argue now that the TED is not a technological solution to the shrimp/turtle conflict. CEE and other environmental organizations have recognized for some time that transfer of the technology to the industry might take some time. However, the milestone mentioned above, the rejection of the target set at the November 1983 TED meeting, and the avoidance of setting any targets is clearly not what we had in mind.

Impediments to TED Use

Based on statements made in the most recent TED meeting and recent NMFS correspondence with FWS, I have to conclude that NMFS will determine its targets for TED use upon the degree to which these targets and the means of achieving them will or will not create friction with the shrimp industry. According to this view, aggressively promoting use of the TED or requiring its use would be burdensome to an industry already beset with economic problems. Believe me, I can understand the attractiveness of this approach.

As has been acknowledged countless times, there is excess harvesting capacity for a fixed shrimp resource. As recently as the January 1986 issue of National Fisherman, an industry leader stated that many of the fleet's current problems go back to the increase in the fleet's size in the 1970's and to the rise in fuel prices after the Arab oil boycott. Certainly imports of maricultured shrimp are not helping, but in the end, I must ask what does use of the TED have to do with all of this? Are not regulations requiring the use of selective gear that will increase the quality of caught shrimp preferable to subsidizing an overcapitalized fleet with billions of pounds of finfish, other marine life, and endangered and threatened sea turtles? When will economic conditions in the industry be good enough so that all shrimp fishermen in the southeastern U.S. will use the TED or an effective device like it? Is the protection of an endangered species from further mortality by means of a device that helps fishermen less important than protecting the shrimp fishing fleet from the consequences of past bad business decisions?

While the chances of improvements in the economic conditions of the shrimp fishing fleet are not likely to be influenced much by use of the TED, the chances of the Hump's ridley recovering from endangerment will surely be decreased, if the TED is not used. It is frankly infuriating to me that NMFS continues to raise the specter of economic problems that will likely never be fully resolved as an excuse for failing to do everything in its power to foster the recovery of the Hump's ridley and other sea turtle populations. If anything, the economic problems of the industry suggest that a voluntary program is not going to lead to 100 percent or even 50 percent use.

Revealing in this connection are several comments in the narrative report by the Alabama Sea Grant Advisory Service on "Construction and Utilization of the Trawling Efficiency Device in the Northern Gulf of Mexico: (Cooperative Agreement NA84-WC-II-06147). There it is stated that without a high incidence of non-target fish, shrimpers do not perceive that the TED has a significant benefit over a non-TED equipped net.

"Unless some reason exists for shrimpers to use this technology (such as demonstrated ability of TED to reduce incidental finfish by-catch), there is no incentive for shrimpers to adopt use of the TED. Unfortunately from the standpoint of demonstrating the utility of TEDs, finfish have not presented a problem of the same magnitude seen in previous years." (p. 2)

This statement should hardly surprise anyone, but it has important implications: in a voluntary situation, a shrimp fisherman will not use the TED when there are not finfish or jellyball by-catch problems regardless of how effective it is in excluding sea turtles. This is especially true

if there is such little reasons as there is now to fear investigation or prosecution for violation of the ESA if one captures an endangered sea turtle.

However effective the TED might be now, it apparently does not provide a large enough advantage to an individual fisherman, whose profit margin is likely to be slim, so that he will purchase and use the device rather than spend that money on upkeep of his vessel, for instance. It is significant for the voluntary program that the new generation, collapsible TED does not provide a regular increase in shrimp catch as did the older versions. Although the device apparently does not undermine the profitability of the vessel, it is less clear that it might increase a vessel's profitability—a benefit that was an important selling point for the old TED, we were told.

Of course, none of these limitations are a problem if you are simply aiming at partial use of the device part of the time. As I said above, however, CLE does not share such a goal.

Progress in the Next Ten Months

I certainly agree with Eldon Greenberg that over the next 10 months, the rate of increase in use of the TED will be a useful indicator of progress toward our goal. This would seem to agree with your own statements that a quantum leap in use is needed. The question remains as to what is to be measured. In our view, the number of nets actively and regularly pulling devices that exclude sea turtles should serve as the measure. Old generation TEDs that may have been distributed by NMFS in the past but are not being used now should not be included. Devices that do eliminate turtle capture but differ from the NMFS TED in some respect might well be counted. A first step in agreeing to such a measure would be for NMFS to suggest possible minimum design features for turtle excluder devices and to circulate these among knowledgeable and interested persons for review. Agreeing upon minimum design features will be critical to measuring progress.

An additional indication of meaningful progress is growth in the availability of devices not just generally, but with a view to geographical distribution of manufacturers. As you remarked, the lack of manufacturers may be a critical obstacle to use of TEDs. Training net shops in the construction of TEDs deserves NMFS' greatest attention. Construction of the 100 TEDs you plan to distribute next year should be undertaken in a number of shops, at least one in each shrimp fishing state, in order to foster achievement of this important objective.

Construction of 100 TEDs by March 1 and full use by July 15 are minimum indications of progress in our view.

An aggressive campaign to involve Sea Grant even more and to insure support of Sea Grant agents in the field is critical to a successful

effort, in our view. Also, greater efforts should be made to contact all commercial shrimp fishermen—through the state licensing process, for instance. Insuring that fishermen are aware of the problem and of the device is critical. It is not even clear whether a majority of fishermen are aware that the problem persists and that a new version of the TED, which addresses past complaints, has been developed. Efforts, such as those outlined at the recent TED meeting by Bob Jones of Southeastern Fisheries Association, should be encouraged.

Your recent letter to fisheries department directors around the southeast will hopefully lead to increased availability of free TEDs and increased use of the devices. However, while this approach may lead to a temporary boost in TED use, TEDs will have to be purchased by some shrimp fishermen now and by all shrimp fishermen when the funds for providing free TEDs are exhausted. While CEE is sympathetic to the difficulties faced by the shrimp fishing fleet, we cannot accept limiting targets for TED use to levels dependent upon the availability of free TEDs. We believe that NMFS has already acquitted itself quite well in representing the interests of the industry and in meeting the research needs of the industry. Indeed, NMFS gear research on the TED and technology transfer activities have benefited the industry more than they have sea turtles and we must question continued expenditure of protected species funds on a program that belongs more appropriately in industry services.

As I am sure you are aware, Congress has passed and the President has signed a balanced budget bill. While details of the budget cuts required by the bill remain unknown, it is clear that funding for many programs such as the protected species programs of NMFS will be in great jeopardy. Every effort requiring use of federal funds for addressing the problem of incidental capture of sea turtles must be scrutinized very carefully, since this may well be the last year that such funds are available. With this in mind, we question the wisdom of spending funds on an attitudinal survey of shrimp fishermen, on institution of permits with associations to determine centers of Kemp's ridley abundance, on production of videotapes, or on remote surveillance of Kemp's post-nesting females. While these projects might have been worthwhile under other circumstances, they are luxuries at this point.

Regulations

As I discussed above, NMFS has on several occasions promised publication of proposed rules regarding use of turtle excluder devices but has never published any such rules. I recognize fully that regulations are not necessarily the most desirable means of achieving goals. However, nothing I am aware of suggests that use of turtle excluder devices by all shrimp fishermen at all times will be achieved otherwise. Of course, if the agency is willing to accept a 50 percent reduction in sea turtle mortality from shrimp fishing (and who knows how this would be determined), then regulations are irrelevant, perhaps, together with the Endangered Species Act.

Whenever regulations are brought into the discussion of this issue, NMFS and the industry have both alledged that any such regulations would be burdensome. Yet there has been little evidence presented to back this up. The environment assessment on the voluntary program mentioned a figure of \$1.1 million in enforcement costs, but this evaluation is questionable. First, the ESA does not include cost of enforcement as a criterion for whether or not the Act's prohibition on taking endangered species is enforced. In any case, NMFS need not bear this "burden" entirely since FWS agents are available to help enforce the ESA. It would seem that cooperative enforcement arrangements could be worked out with FWS, indeed with state officers, so that the "burden" could be spread. Furthermore, it is no doubt easier and less costly to determine whether nets include a TED than whether a wissel has captured a sea turtle.

Furthermore, the environmental assessment's discussion of the enforcement costs of requiring TED use does not address NMFS' costs for carrying out and monitoring a voluntary program. Nor does that discussion address the decrease in benefits that results from the incidental capture and drowning of animals from NMFS and FWS' headstarting and nest protection efforts. Finally, the environmental assessment does not take into account the social costs associated with the discard and loss of huge amounts of groundfish.

Even granting that "burdensomeness" is relevant as a consideration under the ESA, I have yet to understand how use of the TED would be burdensome to the industry without commensurate benefits, including eliminating countless violations of the ESA, eliminating by-catch and loss of billions of pounds of valuable finfish, and increasing the quality of shrimp landed so that it is more competitive with foreign aquacultured imports. Neither requiring use of the TED nor allowing continued drowning of endangered and threatened turtles will get the shrimp fishing fleet out of trouble.

Conclusion

The incidental capture of endangered and threatened species poses a needless threat to these animals' continued existence. The TED provides a solution to this problem, which is equitable and offers benefits beyond aiding in the recovery of endangered and threatened species. The federal government has done an outstanding job of developing the TED. However equitable the TED might be as a solution, it is unlikely to be used as much as it needs to be if Kemp's ridley and other sea turtles are to benefit fully. The federal government has already gone well beyond its responsibilities under the Magnuson Fishery Conservation and Management Act in providing assistance to the shrimp fleet in reducing violations of the Endangered Species Act.

We have stated on numerous occasions going back to 1980 that NMFS should prepare back-up regulations requiring use of the TED in case the voluntary approach does not work. We request that NMFS prepare and

publish a notice of intent to prepare such proposed rules within 60 days. Besides the inducement of free TEDs, we believe that regulations will serve as an important inducement to use of the devices. Waiting for a crisis, more severe than the crisis facing Kemp's ridleys, is only going to make a difficult situation explosive and less difficult to resolve in a fashion that fairly meets the requirements of the ESA and the interests of shrimp fishermen.

Thank you for bearing with this rather long letter.

Sincerely,



Michael Weber

Programs Director

Co-chairperson, TED Voluntary Use Committee

MW:mw

cc. Distribution

**Center for
Environmental
Education**

22 August 1986

Honorable Malcolm Baldrige
U.S. Department of Commerce
Washington, D.C. 20230

Dear Mr. Secretary:

This letter is to notify you that the National Oceanic and Atmospheric Administration (NOAA) and the National Marine Fisheries Service (NMFS) continue to violate the Endangered Species Act (16 U.S.C. 1531 et seq) and the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1801 et seq). This notice is provided pursuant to Section 11 of the Endangered Species Act (16 U.S.C. 1540(g)).

The Center for Environmental Education is a nonprofit conservation organization with 500,000 supporters concerned in part with the plight of sea turtles worldwide. The Center is especially concerned that sea turtles listed as endangered or threatened under the Endangered Species Act of 1973 (ESA) are incidentally caught, injured, and killed in shrimp trawls operating in the Gulf of Mexico and South Atlantic Ocean within the waters of the several states and within the U.S. Fishery Conservation Zone. The Center is also concerned that these trawls catch and discard more than 1.5 billion pounds of finfish each year, most of which is dead or dying upon return to the water—an extraordinary waste of sport and commercial fishery resources.

Notwithstanding clear and abundant data supporting the above-stated facts, NMFS and NOAA have failed to fulfill their responsibilities under the ESA, specifically including Sections 2, 4, 7, 9, and 11. NMFS and NOAA have also failed to fulfill their responsibilities under the Magnuson Fishery Conservation and Management Act of 1976 (MFCMA), specifically including Sections 2, 3, 301, 302, 303, 304, 305, and 306. Failure of NMFS and NOAA to exercise these available authorities continues to jeopardize Kemp's ridley, loggerhead, green, hawksbill, and leatherback sea turtles and to cause the waste of commercially and recreationally important finfishes.

These losses must be mitigated immediately by proven and enforceable measures if the shrimp industry and the federal agencies are to comply with the ESA and the MFCMA. To this end, NOAA and NMFS should issue emergency regulations closing the southeastern commercial shrimp fishery in the South Atlantic and Gulf of Mexico. Should NOAA and NMFS determine

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that requiring use of the Trawling Efficiency Device (TED) will safely protect turtles, finfish, and shrimpers, the fishery closure might be conditionally opened to fishing boats in the areas and during the times set out in the following paragraphs.

1) Definition of TED: The definition of what qualifies as a trawling efficiency device or TED is crucial to the entire regulatory framework. Vagueness should be avoided. A TED is a device as described in NMFS Technical Memorandum NMFS-SEFC-71 (1985) or a device that has the following performance characteristics when installed in shrimp trawl gear:

- 97 percent reduction in sea turtle captures,
- 50 percent reduction in the capture of finfish during day and night operations,
- no significant loss of shrimp catch.

2) Certification of TEDs: TEDs, other than that described in the NMFS Technical Memorandum NMFS-SEFC-71 (1985) must be subjected to a rigorous certification patterned after that to which the NMFS TED was subjected. Certification should be made by the Secretary of Commerce in consultation with a committee of recognized experts in fishing gear performance and statistical analysis.

3) TED Users: All commercial shrimp fishermen in the Gulf of Mexico and South Atlantic Ocean must use a TED.

4) Timing: Effective 1 January 1987, all commercial shrimp fishermen in the Gulf of Mexico and South Atlantic Ocean must at all times have TEDs in any trawl nets that are deployed or capable of being deployed.

5) Area: TEDs must be used by all commercial shrimp fishermen in the Gulf of Mexico and the South Atlantic Ocean in all waters from North Carolina to Texas inclusive, except in those areas where NMFS conclusively demonstrates that sea turtles do not occur.

6) Inspection: All commercial shrimp fishing boats and vessels in the Gulf of Mexico and South Atlantic Ocean are required to obtain an annual inspection certificate, which confirms that all nets aboard said boat or vessel are equipped with certified TEDs, which TEDs are indelibly marked with that boat or vessel state or Coast Guard licensing system number. Such inspection certification shall be kept on board the boat or vessel at all times. Such a boat or vessel is further subject to routine inspection when at the dock or on the water to ascertain if it is meeting the above requirement.

7) A taking of an endangered species does not violate the prohibitions of the ESA, if the taking occurs as part of the normal operations of a boat or vessel equipped with a TED and if a report of the taking is filed with NMFS within 24 hours.

Considering the near record number of sea turtle strandings along the Southeastern coast this year in general and the record number of Kemp's ridley strandings in Texas and Louisiana in particular, the agencies must immediately issue emergency regulations as set out above under both the ESA and the MFCMA while permanent regulations are drafted, subjected to public comment, and promulgated.

As you know, Congress intended that the citizens' suit notice provisions of federal environmental laws should provide an opportunity for affected citizens and organizations to work with the relevant agencies to correct the deficiencies without litigation if possible. In that spirit, the Center for Environmental Education looks forward to working cooperatively with your staff to correct the multiple violations noted above.

Should cooperation fail, the Center will be constrained to seek remedy in the courts.

Sincerely,

Roger E. McManus
 Roger E. McManus
 Executive Director

cc. Dr. Anthony Calio
 Mr. William Gordon
 Mr. Jack Brawner
 Honorable Donald Hodel
 Mr. William Horn
 Mr. Frank Dunkle
 Mr. Michael Spear
 Mr. James W. Pulliam, Jr.
 Mr. Wayne Swingle
 Mr. Robert Mahood
 Dr. Peter C.H. Pritchard
 Mrs. Sally Murphy
 Mr. Don Barry
 Mr. Donald Carr
 Mr. Bob Davidson



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

THE ADMINISTRATOR

AUG 29 1986

Mr. Mike Weber
Center for Environmental
Education
624 9th Street, N.W.
Suite 500
Washington, D. C. 20001

Dear Mr. Weber:

At the meeting on August 20, 1986, I told you that I hoped to see real progress in the protection of endangered and threatened turtles by the start of the 1987 shrimping season. Representatives from both the environmental community and the shrimp industry expressed a preference for proposed regulations resulting from an agreement on the use of TEDs by the shrimp industry and the environmental community rather than having NOAA publish a proposed regulation and rely solely on the usual notice and comment rulemaking process to develop a final regulation.

The suggestion was made by all participants that we should try to mediate a proposed turtle protection program. An agreed program is certainly preferable to one that is imposed upon a reluctant industry because widespread compliance should be much easier to achieve. Representatives of the Texas Shrimp Association, the Louisiana Shrimp Association and the Southeast Fisheries Association pointed out, however, that they were not in a position to speak for the membership of their associations. Since it would be impossible to mediate an agreement with 6,000 individual shrimpers, the prospect for a mediated program of regulation did not appear to be very bright.

Upon reflection, it occurs to me that individual shrimpers might prefer to be bound by a program resulting from mediation than by a regulatory mandate imposed after the customary process of notice and comment. I am willing to try to mediate a proposed turtle saving regulatory program agreeable to the industry and conservation groups if representatives of the Texas Shrimp Association, the Southeast Fisheries Association and the Louisiana Shrimp Association report to me by the




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first of October that these associations would be willing to enter into a process of mediation and agree as organizations to support a program of turtle conservation resulting from the mediation process. By that I mean that the Associations would publicly support establishment of regulations resulting from the mediation process and would work to secure the cooperation of their membership in the implementation of those regulations.

If I receive these assurances, I will begin the mediation process on October 6. If we commence mediation, NOAA will refrain from publishing a notice of proposed rulemaking until at least November 1, and after that date for so long as representatives of the industry and the environmental community agree that satisfactory progress is being made toward the development of turtle saving regulations.

Sincerely,



Anthony J. Calio

EXHIBIT A

**U.S. FISH & WILDLIFE SERVICE RECOMMENDATION TO THE GULF OF MEXICO FISHERY
MANAGEMENT COUNCIL REGARDING USE OF TRAWLING EFFICIENCY DEVICE
JAN. 15, 1986 HOUSTON, TEXAS**

Jack B. Woody
National Sea Turtle Coordinator, FWS

Members of the Council, Ladies and Gentlemen of the audience:

As the National Sea Turtle Coordinator, I represent the U.S. Fish & Wildlife Service, the wildlife management agency within the Department of Interior. Although my agency has primary federal responsibility for a wide range of fish and wildlife, in some cases we share this responsibility with other agencies for certain species. One of these joint responsibilities, under the Endangered Species Act of 1973, is for sea turtles which we share with the National Marine Fisheries Service (NMFS). For a number of years, we have worked very closely with the NMFS in joint efforts related to the research and management of sea turtle resources and we plan to continue these cooperative efforts.

Based on current and historical data from the United States and the Republic of Mexico, the Fish and Wildlife Service believes that a primary limiting factor in the survival of the Kemp's ridley sea turtle is the incidental take by the shrimping fleets of the United States and Mexico. We ask this Council to take immediate action within their jurisdictional area to correct this problem.

I am sure all of you are familiar with the international efforts that are now in their ninth year to save this species. The Mexican Fisheries De-

partment, the NMFS, the National Park Service, the State of Texas, and my agency, with the support of a diverse and large conservation community in both nations has, and continues to work to provide for this animal's survival in the wild — not as an aquarium curiosity or museum display.

During the lifetime of many of us in this room today, we have had the dubious privilege of witnessing this species' decline by 99 percent in less than 40 years, and this decline continues in spite of the concerns and efforts of two nations and their people.

The original cause of the species' decline you are all familiar with; uncontrolled and almost total commercial exploitation of the animals' annual reproductive efforts — the eggs. Adults were also taken for their meat, but in numbers of far less magnitude. This harvest was made illegal by Mexican law, and then it was enforced. Armed Mexican Marines, along with fisheries personnel, maintain intensive surveillance on the entire 15 kilometers of the nesting beach each season. Equipment and additional personnel are furnished by the U.S. Fish and Wildlife Service in this international effort. Every single nest is located and protected; each hatchling is observed until it enters the gulf. Believe me, a coyote or a human poacher is at high risk on this nesting beach, and has been for many years.

To complement this effort, NMFS has developed and implemented the procedures to raise, each year, over a thousand hatchlings in headstarting efforts. For eight years, these headstarted yearling turtles have been released into the Gulf with the hope that the survivors will return to nest

on Padre Island and establish a second nesting population. Even with these efforts, I am not sure the natural population will survive, much less having hope of establishing a second nesting population. The number of Kemps nesting in one day in 1947 was approximately 40 thousand. In 1985, the maximum was 117. It is reasonable to conclude there were approximately 100,000 turtles nesting each year in the mid 1940's during the annual three month nesting season. Today, the maximum is approximately 500. In the last eight years, I have personally witnessed a 30 percent decline in the number of nesting females.

My agency, the Fish and Wildlife Service, has been and is doing all within its jurisdictional charge to save this species. It is not enough. That is why two of our Regional Directors are here today, Jim Pullium from Atlanta representing our SE Region, and Mike Spear from Albuquerque, representing Texas and our international work with Mexico; to stress our concern and seek your support. We are convinced there remains an additional significant limiting factor for this endangered species. One which can be corrected - that is the incidental take by our inshore and offshore shrimp trawlers.

We are recommending to this Council that you take action to amend the current G.M.F.M.C. - "Fishery Management Plan for Shrimp Resources of the Gulf of Mexico Fishery" - to incorporate mandatory use of the TED on all inshore and offshore shrimp trawls within U.S. waters in the Gulf of Mexico by March 1, 1987. The FWS will also ask the South Atlantic Fisheries Management Council that this recommendation be adopted and put into effect within Atlantic waters at the same time, even though a management plan for the shrimp fishery has not yet been completed for that region. We are

seeking the support of this Council, as well as the South Atlantic Council, to obtain 100 percent use of the TED in our shrimp fleet by March 1, 1987.

The Magnuson Fishery Conservation and Management Act of 1976 explicitly states that conservation measures must promote efficiency in the utilization of fishery resources. Mandatory use of the TED is consistent with this national standard in relation to sea turtles and groundfish, but is not presently included in the current Gulf of Mexico shrimp fishery management plan.

We do not make this recommendation lightly, or on the spur of the moment. We are aware of the economic problems our shrimp industry faces. However, we do not accept the argument that use of the TED will be an insurmountable expense that the industry cannot afford. On the contrary, correct use of the TED can and will improve operational efficiency, as well as quality of the product without reduction of shrimp catch⁽²⁾.

No one, especially this council, should overlook the fact that studies have shown an average of nine pounds of finfish are taken and discarded for every pound of shrimp. There is evidence that shrimp trawling is contributing to the depressed ground fishery⁽¹⁾, again, a result of incidental catch that use of the TED can significantly reduce. Large numbers of juvenile red snappers are taken, especially along the Texas and Louisiana coast⁽³⁾. Areas of young snapper abundance coincide with shrimp areas. Recent NMFS estimates of the number of individual red snappers taken have been approximately 5 million per year, with 63 percent of this catch in Texas waters. These millions of snappers removed are not utilized, and hence, not allowed to grow and be available to the commercial or recre-

tional fishery. The real and long-term impact of this incidental take on snapper populations remains unknown, but regardless, can we afford to condone this when an alternative, the TED, is available? Use of the TED can substantially reduce this waste of our snapper resources. In addition to snappers, NMFS studies have estimated that the shrimp fleet discards over 385 million pounds of Atlantic croaker per year in the northern gulf⁽¹⁾. These young-of-the year fish will not be available to the sport or commercial bottom fishery, nor will they ever spawn. The total estimated finfish by-catch of the northern gulf shrimp fleet involves over 150 species⁽⁴⁾ and is estimated by NMFS to be in excess of 1 billion pounds each year. This figure includes not only croaker and snapper, but also sea trout, grouper, menhaden, redfish, flounder and numerous other sport and commercial species. Can the United States and the respective states continue to ignore this data, all of which is readily available?

The point in presenting this information is to demonstrate that the primary concern of the Fish & Wildlife Service is to urge the Councils to take immediate action to prevent the incidental take of an estimated 50 thousand threatened and endangered sea turtles by the United States shrimp fleet each year. We also want to clearly make the point there is far more at stake than sea turtles. Other commercial and recreational fisheries should be as concerned as we are, albeit for other reasons.

The NMFS has expended almost \$3.5 million since 1977 on research and development of the TED. Today, with present voluntary-use there is less than five percent part-time use by the shrimping fleets in Atlantic and Gulf waters. We believe that of those shrimpers who now use the TED on a

voluntary basis, some only use this gear when they are experiencing problems with jellyballs or an inordinate amount of by-catch: not on a daily basis, and not for turtles or for other fishery concerns. It will take far too long, if ever, for the industry to voluntarily adopt and use this gear as a permanent part of its trawling operations.

Under the mandate and requirements of the Endangered Species Act, this limited use is not acceptable to the Fish & Wildlife Service when there exists an alternative which does not shut down or significantly impede the shrimping industry. The use of the TED resolves the conflict with endangered species, to say nothing of the additional benefits to finfish interests, both commercial and recreational. Shrimping would continue throughout present waters and the needs of the sea turtles would be satisfied.

We recognize the Kemp's ridley is also being taken by shrimp trawlers in Mexican waters. The Fish & Wildlife Service is working closely with Mexico, urging that they too, adopt the TED. We have coordinated one demonstration by NMFS gear experts on the Pacific coast and are now working on the Mexican Gulf coast for additional demonstrations by NMFS. In addition, the Fish & Wildlife Service is active in Central American nations, encouraging TED use. However, it is difficult to induce use of this gear by others when less than five percent of our own fleet is using it. Specifically, mandatory use of the TED will do the following:

1. Eliminate drowning of sea turtles.
2. Maintain present levels of shrimp catch.
3. Reduce finfish by-catch and waste by 50 to 70 percent - Over 1 billion pounds per year are now discarded in the Gulf of Mexico alone.
4. Provide further support and emphasis for TED adoption by foreign

fleets. Until the United States demonstrates its resolve to firmly address this problem it will be difficult to expect less developed nations to adopt modern management methods.

The Kemp's ridley does not have the luxury of time, and cannot surmount this human-caused mortality, along with the host of natural and other factors constantly working against the species' survival. This is one case where an identified problem can be solved. Mandatory use by the Gulf and Atlantic inshore and offshore shrimp fleet beginning March 1, 1987 is the recommendation the Fish & Wildlife Service makes to this Council.

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Center for
Environmental
Education

9 January 1986

Mr. Julius Collins, Co-Chairperson
The Gulf of Mexico Fishery Management Council
Lincoln Center, Suite 881
3401 West Kennedy Boulevard
Tampa, FL 33609

Dear Mr. Collins:

As you may know, the Center for Environmental Education and other conservation organizations have for several years participated in efforts with government and the fishing industry to reduce the incidental drowning of threatened and endangered species of sea turtles. We wish to take the occasion of the next meeting of the Gulf Council to share with the Council our views on these efforts. We hope that this letter will aid the Council in reviewing the Gulf shrimp fishery management plan as to its effect on the recovery of endangered and threatened species of sea turtles and on finfish resources in the Gulf of Mexico. I would appreciate it if you would distribute the enclosed copies to the other Council Members.

The Problem

Populations of five species of sea turtles found in U.S. waters have been reduced to such an extent that they have been listed as threatened or endangered under the Endangered Species Act (ESA). Of those species listed as endangered, there are few more endangered than Kemp's ridley sea turtles. In 1947 in several days more than 40,000 female Kemp's ridleys nested at the species' principal nesting beach at Rancho Nuevo, Tulum, Mexico. Excessive harvesting of eggs and incidental capture in shrimp trawls reduced this reproductive population by more than 90 percent in twenty years. Since 1975, no more than 760 females have nested during an entire season.

Although poaching of adults and eggs has been largely eliminated as a mortality factor for Kemp's ridleys through the efforts of the Mexican government and the U.S. Fish and Wildlife Service, the number of nesting female Kemp's ridleys has declined steadily. In 1978, an estimated 924 Kemp's ridley females nested

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in Mexico. In 1985, an estimated 677 females nested. Thus, we are concerned with a species that is not only endangered but is declining toward extinction. There can be little doubt that incidental drowning of even a relatively few adults and juveniles in shrimp trawl continues to contribute to this decline.

For more than a decade, the federal government, state governments, and the scientific community have acknowledged that incidental capture and drowning in shrimp trawls has been a significant source of mortality for all sea turtle species in U.S. waters. NMFS has estimated that each year more than 45,000 sea turtles are captured in the shrimp fishery and that of these more than 12,000 drown. Loggerhead sea turtles, listed as threatened under the ESA, are much more frequently caught and drowned in shrimp trawls than are Kemp's ridley or other endangered species of sea turtles. This is likely an artifact of the comparative abundance of loggerheads and is certainly not an indication of minimal impact of shrimp trawling on the recovery of Kemp's ridleys.

Before proceeding, I think it important to emphasize that the natural history of Kemp's ridley disposes it to be captured in shrimp trawls. As one of the principal food items of this species is portunid crabs, the species frequents the very same "muddy" waters that are so favored by commercially valuable shrimp species and by extension shrimp fishermen. I have enclosed a copy of the recent NMFS' review of the status of this and other listed species of sea turtles for your information.

Research on the Turtle Excluder Device

Much to its credit, the National Marine Fisheries Service (NMFS), which is charged with fostering the recovery of endangered and threatened marine species, undertook a research program in 1977 which has spent more than \$3.4 million in perfecting gear that will eliminate the incidental drowning of sea turtles while maintaining shrimp catch. Interestingly, the early years of research led to several unanticipated findings. First, by examining how nets caught turtles, NMFS scientists were able to identify modifications to shrimp nets that have benefited the harvesting industry. Second, it was discovered that if nets are fished for no more than 90 minutes, the drowning of sea turtles can be reduced by 90 percent.

At a September 1980 meeting with conservationists and industry representatives in Charleston, South Carolina, NMFS staff described a new piece of gear which was much more effective in excluding sea turtles and maintaining shrimp catch than the excluder panel, which had been the initial focus of the gear research program. Further research refined the turtle excluder device (TED) so that it was completely effective in eliminating the drowning of sea turtles. The TED actually increased shrimp catch by an average of seven percent. The Center for Environmental Education funded an economic cost/benefit analysis

on the use of the device. This analysis showed that the larger vessels would increase their profits by thousands of dollars if they were to use TEDs. I have enclosed a copy of this report and only note that the TED has been further refined.

Responding to complaints from fishermen, NMFS continued modifying the TED by making it lighter and less bulky, therefore safer. By September 1984, NMFS had developed a TED that met the original design specifications and more, since the latest TED reduces by-catch of finfish significantly.

The TED provides an equitable means for eliminating the threat posed by further shrimp fishing to the continued existence of Kemp's ridley and other sea turtle species. As was clear from NMFS' briefings at the most recent meeting of the TED Committee on November 7, 1985, the TED does several things very well:

- o it eliminates the drowning of sea turtles while maintaining shrimp catch;
- o it reduces finfish by-catch by 50-70 percent thereby reducing the waste of over one billion pounds of discarded finfish in the Gulf of Mexico alone;
- o it substantially reduces the by-catch of other marine life;
- o by reducing by-catch, the TED maintains the quality of shrimp caught; and,
- o it is lightweight, relatively easy to use, and comparatively inexpensive.

The incidental capture and drowning of endangered and threatened species of sea turtles is a problem. The TED is a solution. So what is the problem?

The Voluntary Program

At the September 1980 meeting of representatives of industry, government, and conservation organizations in Charleston, South Carolina, representatives of the environmental community agreed to forego pursuing regulations requiring reduced trawl times, which research indicated would nearly eliminate the drowning of sea turtles in shrimp trawls. The environmental community was persuaded by assurances from industry that it would voluntarily reduce tow times and from NMFS that a new piece of gear, the TED, would soon provide a solution beneficial both to shrimp fishermen and sea turtles.

Soon afterwards, NMFS held a scoping meeting regarding a supplemental environmental impact statement on regulations implementing the 1978 listing of loggerhead and other sea turtles under the ESA. At that time, NMFS said it would prepare regulations requiring use of the TED once the device was practical. It was not long afterwards, however, that NMFS said it would pursue a voluntary approach and would prepare

regulations requiring use of the TED in the event that the voluntary approach did not lead to use of the TED in the shrimp fishery. No such regulations have ever been prepared.

Based upon these assurances, CEE and other environmental organizations have consistently pursued a voluntary approach to reducing sea turtle drownings while we awaited further improvements in gear or for the word to get out to shrimp fishermen or for the device to be refined in this or that manner. We have relied upon assurances that TED's other benefits, such as reduction of finfish and jellyball by-catch, would sell the device. I myself have devoted considerable efforts to promotion of the TED, including serving as Co-chairperson of a committee of representatives of shrimp industry and conservation organizations since 1982 with Ralph Rayburn of Texas Shrimp Association. I believe that we have made a good faith effort to promote use of the device. I would be happy to provide the Council with materials describing the extensive efforts made by government, industry and environmental organizations to promote the use of the TED.

Although hundreds of thousands of dollars in federal, state, and private funds have been spent promoting the TED over the last five years, less than five percent of the vessels in the Gulf and South Atlantic shrimp fleets are at any time using devices that exclude sea turtles. We have reluctantly concluded that a voluntary approach is not likely to lead to use of excluder devices and to elimination of this threat to the continued existence of Kemp's ridley sea turtles.

The Fishery Management Plan for Shrimp, Gulf of Mexico

In its fishery management plan for Gulf of Mexico shrimp, the Gulf Council recognized the problems of incidental capture of finfish and threatened and endangered species of sea turtles.

Incidental Catch of Sea Turtles

As the Gulf shrimp fishery management plan acknowledged, incidental capture by shrimp fishing operations is increasingly important as populations decline. The plan, however, does not reflect the most recent estimates as to the magnitude of this incidental capture problem. In its "Environmental Assessment of a Program to Reduce the Incidental Take of Sea Turtles by the Commercial Shrimp Fishery in the Southeast United States," NMFS estimated that more than 45,000 sea turtles are incidentally captured in shrimp trawls in the Gulf and South Atlantic, of which 12,000 drown. Of these, NMFS has estimated that 14,000 are captured in the Gulf of Mexico, of which 5,500 drown. Nor does the plan reflect the fact that the nesting population of Kemp's ridleys has continued to decline and shows no signs of recovery. Incidental capture of Kemp's ridleys in shrimp trawls in U.S. and Mexican waters is thought to be the principal reason for this trend.

In describing efforts to reduce this problem, the plan is also out of date. First, NMFS has not defined critical marine habitat areas for sea turtles nor has it restricted trawling in any area for purposes of sea turtle conservation, nor has it formally proposed any such actions. The Texas closure no doubt eliminates some incidental capture of sea turtles. Second, NMFS had developed a device by 1982 that eliminated sea turtle drowning in shrimp trawls while actually increasing the shrimp catch. This device, the TED, was later refined to reduce finfish by-catch and by September 1984, a final version was completed that was light and collapsible, thereby meeting complaints from shrimp fishermen that earlier models were heavy, bulky, and therefore dangerous.

The Gulf Council adopted the following as Objective 4 of the Gulf shrimp fishery management plan:

Promote consistency with the Endangered Species Act and Marine Mammals (sic) Protection Act.

Based upon information available at the time, the Council adopted Measure 7 to achieve this objective:

Develop and implement an educational program to inform shrimpers of the current status of sea turtle populations and of proper methods of resuscitation and return to sea of incidentally-captured sea turtles.

Since this measure was adopted in 1981, there have been significant changes. First, as the result of efforts by federal and state government agencies and by industry and environmental organizations, the status of sea turtles and the need for their conservation is now widely known in the shrimp fishing fleet. Likewise, these and other efforts, such as those by Sea Grant, have informed shrimp fishermen of the resuscitation methods. Second, a device is now available that eliminates the drowning of sea turtles while maintaining shrimp catch. Presumably, had such a device been available in 1981, the Council would have fashioned Measure 7 differently.

Considering these and other benefits of TED use, we urge the Council to require use of the TED by shrimp vessels at all times in the Gulf of Mexico by the beginning of the 1987 season. Second, we urge the Council to require use of the TED by shrimp boats at all times in the Gulf of Mexico by the beginning of the 1988 season. These delays in required use of the TED will allow time for acquisition of TEDs and training in their use. We are eager to see that shrimp fishermen receive such assistance as they need in order to meet this new requirement.

In our view, failure to require the use of a device, such as the TED, which eliminates several problems identified in the fishery management plan and which would virtually eliminate illegal takings of endangered sea turtles, cannot be justified.

Considering the availability of the TED, the current regulations implementing the fishery management plan do not promote consistency with the ESA.

Incidental Catch of Finfish

Among other things, the November 1981 fishery management plan noted that large numbers of juvenile groundfish of recreational and commercial importance are captured and killed in shrimp trawls each year. The plan estimated that 70 percent of these discards are species usable by the groundfish industry. On the average, nine pounds of fish are caught and discarded for every one pound of shrimp caught and kept. As a result, approximately one billion pounds of finfish is discarded each year in the Gulf of Mexico alone.

In response to this problem, the Council adopted the following as Objective 5 of its shrimp fishery plan:

When appropriate, minimize the incidental capture of finfish by shrimpers.

To achieve this objective, the Council adopted the following as a management measure:

Encourage research on and development of shrimping gear which reduces incidental catch without decreasing the overall efficiency of shrimping or excessively increasing the cost of gear.

NMFS gear research has perfected a TED design that meets the criteria of this measure. As noted above, the TED reduces finfish by-catch by 50-70 percent, maintains shrimp catch, increases shrimp quality by reducing finfish by-catch, and is lightweight, collapsible, and relatively inexpensive. Implementing regulations therefore should be amended to reflect the current situation, as detailed above in the discussion regarding incidental catch of sea turtles. Considering the availability of the TED, current regulations do not appropriately minimize the incidental capture of finfish by shrimpers. Furthermore, these regulations promote inefficiency that is inconsistent with the national standards of the Magnuson Fishery Conservation and Management Act.

Impediments to TED Use

We are urging promulgation of regulations requiring use of the TED because, as mentioned above, we do not believe that the voluntary approach will lead to full use of the TED and to elimination of the threat to endangered and threatened sea turtles posed by continued incidental drowning in shrimp trawls. Besides the lack of progress to date in securing voluntary use of the device, we are persuaded that conditions within the shrimp fishery itself militate against voluntary use of the TED at all

times.

As I am sure you are painfully aware, the economic conditions of the harvesting sector of the shrimp industry are marginal. Government and industry both recognize that there is excess harvesting capacity for a fixed shrimp resource. This has reduced catch and earnings for most fishermen. The rise in fuel prices after the Arab oil boycott, increasing insurance premiums, and competition from imported maricultured shrimp have also contributed to the poor condition of the harvesting sector.

However effective and manageable the TED might be now, it apparently does not provide a large enough advantage to an individual fisherman, whose profit margin is likely to be slim, so that he will purchase and use the device rather than spend that money on upkeep of his vessel, for instance. However, this does not mean that requiring use of the TED will negatively influence the economic condition of the industry. If anything, the use of the device will provide economic and resource benefits which would not otherwise be attainable. Among these benefits which the TED offers to individual fishermen are the reduction in damage to caught shrimp arising from the reduction in finfish and other by-catch in the net. Unfortunately, these benefits are likely not sufficient to induce voluntary use throughout the fleet.

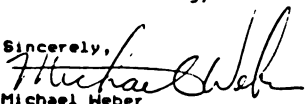
Conclusion

The Center for Environmental Education is committed to seeing the TED used throughout the Gulf and South Atlantic. Only through requiring use of the TED can the Gulf of Mexico shrimp fishery management plan be brought into compliance with the ESA and the national standards of the Magnuson Fishery Conservation and Management Act. We are eager to explore with the Council and other parties activities and measures to assist the shrimp fishing fleet in acquiring and using this gear. In order to allow sufficient time for amending the regulations implementing the shrimp management plan before the 1987 shrimp season, we urge the Council to initiate the process immediately by requesting that NMFS issue a notice of intent to prepare regulations as we have proposed.

I would very much appreciate the opportunity to appear before the Council in order to present and discuss our views.

Thanking you for your consideration and wishing you a successful meeting, I am

Sincerely,


Michael Weber
Programs Director

National Audubon Society

SOUTHWEST REGIONAL OFFICE

525 WALLINGWOOD, SUITE 1505, AUSTIN, TEXAS 78746 (512) 327-1943



January 9, 1986

Jack Brawner
National Marine Fisheries Service
9450 Koger Blvd.
St. Petersburg, FL 33702

Dear Mr. Brawner:

The National Audubon Society is a charitable, non-profit conservation and education organization working on behalf of conservation of wildlife and wildlife habitat. Our members are concerned about endangered species and have worked diligently to further programs designed for the recovery of species whose plight is largely due to activities of humans.

Kemp's ridley sea turtles are in serious trouble along the Gulf coast. State, federal and private efforts to assist the recovery of the Kemp's ridley have involved costly and heroic measures to protect nesting habitat and young hatchlings. Little has been known about sources of mortality to mature turtles on the open ocean.

Tagging data suggests that shrimp-trawling in U.S. waters contributed to the loss of many mature female Kemp's ridleys, as well as many more juvenile Kemp's ridleys. Incidental catches by shrimp trawlers appear to have also caused the death of thousands of threatened loggerhead turtles. Losses of turtles to shrimp-trawling operations appears to be preventable by the installation of Trawling Efficiency Devices (TED's) in the shrimpers' nets. TED's also reduce the incidental take of finfish, contributing to sorting efficiency on deck without a loss in the shrimp catch.

TED's have been employed voluntarily in several coastal states, but many Texas shrimpers have resisted using the devices, even though the devices may save shrimpers time and money while saving turtles as well as significant tonnages of commercially and recreationally important finfish.

Since a cause of turtle mortality is known and an effective remedy is available and economic, the National Audubon Society urges that Trawling Efficiency Devices be required on commercial shrimp vessels in the Gulf of Mexico. Representatives of the Audubon Society have been in touch with representatives of

Louisiana, Mexico, New Mexico, Texas
AMERICANS COMMITTED TO CONSERVATION

page 2 - Brawner

Shrimping organizations in Texas and have been assured that thoughtful and intelligent people in the shrimping industry are amenable to using Trawling Efficiency Devices. Relevant agencies should work with shrimpers to assure that the shrimpers know how to install the devices and how to set the nets properly to obtain the best trawling efficiency with the devices in place. Extension services should include shrimpers in the development of the regulations in order to assure that regulations are workable, but the National Audubon Society does not believe that an extension of a voluntary program has likelihood of success in Texas. We believe that the devices must be made mandatory in order to provide timely and necessary protections to the Kemp's ridley sea turtle.

Sincerely,

Dede Armentrout
Regional Vice President

cc: Texas Audubon chapters
Louisiana Audubon chapters
Jack Woody, U.S.F.W.S.
Fran Spivy-Weber, Nat'l. Audubon Society, Washington, D.C. - LA
Dick Martyr, Nat'l. Audubon Society, New York
Alan Allen, Sportmen's Clubs of Texas
Ken Kramer, Sierra Club
John Hamilton, Texas Conservation Foundation
Ralph Rayburn, Texas Shrimp Association
Murray Walton, Wildlife Mgmt. Institute
Byron Brewer, Sierra Club
Don Cramer, Texas Recreation & Parks Society
Evelyn Bonavita, League of Women Voters of Texas
Andy Sansom, Nature Conservancy
Bill Morrill, Wildlife Society
Danny Roth, Defenders of Wildlife
Susan Peterson, TX Committee on Natural Resources
David Price, River Recreation Assoc.
David Steed, PICES
Earl McKeithan, Bass Clubs
Brandt Mannchen, Sierra Club
Linda Maranas, Center for Environmental Education
Carole Allen, HEART (Help Endangered Animals-Ridley Turtles)



HEART

Box 681231

Houston, TX 77268-1231

My name is Carole Allen, chairman of HEART (Help Endangered Animals-Ridley Turtles) a special committee of the Piney Woods Wildlife Society of Houston. We are supported by other conservation groups and many herpetological societies across the country. Each member of the council both voting and non-voting have received a letter from HEART asking that TEDs be required on shrimp boats and vessels. I have with me today copies of correspondence to be entered into the record from the Center for Environmental Education, the Greenpeace Southeast organization, and the Lone Star Chapter of the Sierra Club. A representative of the Houston Audubon Society speaking for the National Audubon Society will also make a statement. The underlying theme in all of the letters is the request to the Gulf of Mexico Fisheries Management Council to take whatever steps are necessary as expeditiously as possible that will result in the use of Trawling Efficiency Devices. The Kemp's ridley sea turtle has no time left for further studies or surveys or analyses.

If the United States shrimp fleets use Teds, then we can ask our neighbors in Mexico to follow our example as they work near the only remaining nesting beach of the ridleys. We have no right to make this request at present.

The letter Michael Weber has written on behalf of the Center for Environmental Education summarizes the work of the National Marine Fisheries Service which began in 1977, almost 10 years ago, to develop gear for the shrimp industry to eliminate sea turtle mortality. Almost 3 1/2 million dollars have been spent to provide a good product, and they have done it. Teds will save the Kemp's ridley sea turtle as well as the other species while reducing waste of finfish.

There are other reasons not to wait any longer. The tax dollars that have funded the National Marine Fisheries Service development of the TED and dollars that fund the head start program of Kemp's ridley hatchlings at Galveston are becoming as endangered as the turtle itself.

Every Kemp's ridley sea turtle whether it is juvenile or adult is vital to the survival of the species. We ask for use of TEDs now - to reduce bycatch, to conserve finfish, and to save the Kemp's ridley sea turtle from extinction.

JANUARY 14, 1986

2

Carole H. Allen, HEART

SIERRA CLUB



LONE STAR CHAPTER

January 2, 1986

Julius Collins
Chair, Gulf of Mexico Fishery Management Council
163 Creekbend Dr.
Brownsville, TX 78521

Dear Mr. Collins:

On behalf of the Lone Star Chapter of the Sierra Club's almost 12,000 members, I want to express our organization's total support for mandatory regulations to implement Trawler (or Turtle) Efficiency (or Excluder) Devices (TED's) on all shrimp and other trawlers to reduce the number of endangered and threatened sea turtles taken incidentally.

In particular our group is concerned that the Kemp's Ridley Sea Turtle, the most endangered of all sea turtle species, is declining and nearing extinction due to these accidental drownings in trawls. The numbers of this sea turtle nesting in a single day has decreased from 40,000 in the 1940's to 117 in 1985. At most, the FWS estimates that during the 3-month annual nesting period, there were no more than 500 females nesting. Poaching and predation of these turtles have all but been eliminated due to the cooperative efforts of the Mexican Fisheries Department and the FWS. In addition the head start program has been successful for the past 9 years due to the efforts of the NMFS, FWS, NPS, TPWD, and the Mexican government. All of these efforts will fail if the remaining high mortality factor, drowning in trawler nets, is not reduced to as near zero as possible immediately. Young turtles and females are drowning before they have an opportunity to grow up, mate or nest. The number of strandings of Kemp's Ridley, usually caused by drowning in nets, has doubled overall since 1980 and quadrupled in Texas.

The time to act is now. Not only will TED's exclude turtles, but they will also reduce, considerably, undesirable marine catches like sharks, jellyfish, crabs, thus increasing the value of the catch and conserving other marine fishery species (reduce kill wastage). After all, one of the tenets of the GOMFC and NMFS is to conserve all fishery species. This is particularly important for potential, presently unexploited stocks like shark species and sport fishes such as Redfish that are caught incidentally in the trawls.

The Lone Star Chapter is extremely concerned that the GOMFC has yet to move forward under its authority with NMFS to require the use of TED's. This is especially troubling when the Endangered Species Act requires such actions when species are threatened with extinction.

 We urge the Council to implement emergency mandatory regulations to require the use of TED's on all pertinent shrimp and other trawlers immediately. With the loss of each Ridley Turtle, we are that much closer to losing

When we try to pick out anything by itself, we find it hitched to everything else in the universe.

Mr. Julius Collins
January 2, 1986
Page Two

a valuable economic, aesthetic, scientific, biologic, and ecologic species
forever.

Sincerely,

Brandt Mannchen

Brandt Mannchen
Chairperson, Wildlife Committee
Lone Star Chapter, Sierra Club
1515 Missouri, #17
Houston, TX 77006
H - (713) 522-1489
W - (713) 645-5316



MONITOR

THE CONSERVATION, ENVIRONMENTAL
AND ANIMAL WELFARE CONSORTIUM

1506 19th St., N.W.
Washington, D.C. 20036

(202) 234-6576

14 February 1986

Mr. Julius Collins, Co-Chairperson
Gulf of Mexico Fishery Management Council
The Lincoln Center, Suite 881
5401 West Kennedy Blvd.
Tampa, FL 33609

Dear Mr. Collins,

The following organizations support the contents of this letter:

American Cetacean Society
Animal Protection Institute of America
Animal Welfare Institute
Center for Environmental Education
Defenders of Wildlife
Friends of Wildlife
The Fund for Animals
Greenpeace U.S.A.
The Humane Society of the United States
International Fund for Animal Welfare
International Wildlife Coalition
Living Ocean Society
Monitor International
National Audubon Society
Society for Animal Protective Legislation
The Whale Center
Wider Caribbean Sea Turtle Recovery Team (U.S. members)
World Society for the Protection of Animals

We are writing to request that the Gulf of Mexico Regional Fishery Management Council amend the regulations implementing the fishery management plan on Gulf of Mexico shrimp to require use of the trawling efficiency device (TED) by the 1987 season in vessels and boats greater than 40 feet in length.

Although other recent correspondence to you sets forth reasons for requiring the TED by the 1986 season, we wish to emphasize several points:

First, the incidental capture and drowning of endangered sea turtles is a violation of the Endangered Species Act (ESA). The current regulations on shrimp fishing in federal waters are allowing avoidable violations of the ESA by not requiring use of the TED.

Second, although the capture and drowning of some species, especially the Kemp's Ridley, is relatively infrequent in the Gulf, the impact is significant: the number of female Kemp's Ridelies nesting at Rancho Nuevo has declined 30% over the last eight years in spite of the fact that the other principal sources of mortality for the species have been eliminated.

Third, the inefficiency of current shrimp fishing practices leads to the incidental capture and discard of more than one billion pounds of finfish of commercial and recreational value each year in the Gulf of Mexico alone.

The TED, which is the result of a research program funded with \$3.4 million in federal endangered species money so far, can eliminate these problems while maintaining the shrimp catch. A light, collapsible and effective TED has been available since September 1984, yet the device is used by only a very small fraction of the shrimp fleet. If this device is to be used throughout the Gulf, as it must be, its use will have to be required. Rather than being simply burdensome to the shrimp fishermen, this requirement will provide benefits that are well documented.

We support efforts to provide TEDs to fishermen at a reduced cost. However, we do not support limiting use of the TED to the availability of subsidies. Federal endangered species funding should not be used for transfer of the technology to the industry, particularly if the industry does not commit funds available to it through programs such as the Saltonstall-Kennedy grants. The federal government has devoted enough of its very limited endangered species funding to developing a solution for the shrimp industry. It is time that industry takes up the effort.

We look forward to cooperating with the Management Council in developing appropriate regulations and assistance programs to insure that the TED's benefits to critically-endangered species and other valuable marine resources are finally realized.

Sincerely,



Craig Van Note
Executive Vice President

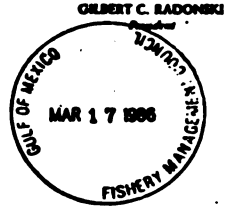
cc: Dr. Anthony Calio
William Gordon
Jack Brawner



Sport Fishing Institute

March 13, 1986

Mr. Julius Collins
Gulf of Mexico Fishery
Management Council
5401 West Kennedy Blvd.
Tampa, FL 33609



Dear Mr. Collins:

The Sport Fishing Institute has long been concerned with the destruction of juvenile fish species associated with shrimp trawling in the Gulf of Mexico and South Atlantic. For example, according to the 1981 Gulf of Mexico Fishery Management Shrimp Plan, approximately nine pounds of juvenile finfish are caught and destroyed for each pound of shrimp landed by conventional shrimp trawling techniques. This has resulted in the irrevocable loss of at least one billion (some estimates as high as two billion) pounds of finfish each year in the Gulf of Mexico alone.

In addition to the decimation of valuable sport and commercial finfish species, shrimp trawling also has been implicated, along with previously uncontrolled poaching of adults and eggs of turtles from nesting beaches, with the precipitous decline of the Kemp's ridley sea turtle, one of five species of sea turtles currently listed as threatened or endangered under the Endangered Species Act.

We have been highly enthusiastic and optimistic concerning the laudable research efforts undertaken by the National Marine Fisheries Service (NMFS) for developing a turtle excluder device (TED) for shrimp trawls that would substantially reduce the unnecessary finfish by-catch as well as prevent the capture of sea turtles. As we understand the current situation, the development of the TED has been successfully concluded and the device is now fully operational and may be purchased at a reasonable price. We understand that the TED effectively reduces finfish by-catch from 50 to 70 percent, depending on trawling location and species of fish, while improving both the quality and quantity of the shrimp harvested by the trawls.

However, we have been reliably informed that ongoing efforts to encourage voluntary use of the TED by fishermen trawling for shrimp has been only marginally successful. In fact only a handful of the thousands of shrimp trawls used in the Gulf of Mexico are equipped with TEDs. Thus, as we see it the job is just half done. The \$3.4 million investment by NMFS in developing the TED promises to be wasted unless the devices are incorporated on all shrimp trawls.

1010 Massachusetts Avenue, N.W. (Suite 100), Washington, D.C. 20001 (202) 896-0770

Mr. Julius Collins
March 13, 1986
Page two

In view of the considerable finfish and turtle conservation attributes demonstrated by the TEDs and the explicit responsibility for complying with the Endangered Species Act and for the management of fishery resources vested in NMFS and the Fishery Management Councils, the Sport Fishing Institute respectfully requests that these agencies take appropriate action to require the mandatory use of TEDs on all shrimp trawls no later than the beginning of the 1987 shrimp season. Comparable action by appropriate fisheries agencies with jurisdiction in state waters also is recommended.

Sincerely,

JCR Radomski

GCR/mak

cc: Congressman Walter Jones
Congressman John Breaux
Senator John C. Danforth
Bill Gordon
Jack Brawner
Hugh Swingle
Edwin A. Joyce
Duane Harris
Harry Schafer
Frederick Deegan
Robert Mahood
Paul Sandifer
Robert J. Kemp
David M. G. Gould
Elwood K. Harry
B. J. Putnam
Rudolph Rosen

Edward C. Smith, Jr.
George S. Agnew
Cornel Arceneaux
Alex M. Jernigan
Randy Bright
Frank E. Carlton
Bruce Link Cartwright
Maurus F. Claverie, Jr.
Rip Cunningham
Peter F. Foley
Walter W. Fondren, III
Ted Forsgren
Rollie Franzen
John M. Green
Gregory McIntosh, Jr.
Harry Vernon
Coastal Conservation Assn.
- Alabama Chapters
- Biloxi-Gulfport Chapter
- Pascagoula Chapter

Department Of The Interior
RECEIVED

MAR 20 1986

Fishery Resources
and Office Atlanta, Ga
- 4 Wildlife Service



The South Carolina Wildlife Federation

Arcadian Plaza, Suite B-1, 4949 Two Notch Road
P. O. Box 4186 • Columbia, South Carolina 29240

Phone (803) 786-6419

President
LARRY E. HAMILTON, JR.
44 York Hill Road
Columbia, S. C. 29210

First Vice President
H. R. LINDSEY
Route 1, Box 423
Charleston, S. C. 29405

Second Vice President
W. BLURNE WATSON, JR.
750 West Liberty Street
Sumter, S. C. 29150

Treasurer
E. T. BORDING
435 Kappa Road
Columbia, S. C. 29204

Affiliate Representative to
National Wildlife Federation
WALTER T. ANGEARN
4612 Chestnut Road
Columbia, S. C. 29226

Secretary
J. L. LINDSEY

RESOLUTION to encourage mandatory use of Trawling Efficiency Devices (TED)

WHEREAS about 45,000 sea turtles are caught each year by the South Atlantic and Gulf of Mexico shrimp trawl fishery, and

WHEREAS about 12,600 of these turtles drown, including the threatened loggerhead and green sea turtle and the critically endangered Kemp's ridley sea turtle, and

WHEREAS South Carolina shrimp fishery accounts for approximately 20% of this mortality, and

WHEREAS the U. S. Fish and Wildlife Service believes that shrimp trawlers are currently one of the primary limiting factors in the recovery of Kemp's ridley sea turtle, and

WHEREAS the Kemp's ridley sea turtle has approximately 500 turtles nesting annually, making loss of a single mature animal significant to the survival of the species, and

WHEREAS the National Marine Fisheries Service has developed a Trawling Efficiency Device (TED) which can reduce sea turtle captures by 97% while maintaining shrimp catches equal to or slightly above standard rigged trawls and

WHEREAS the TED can also eliminate other by-catch including jellyfish, horseshoe crabs, rays, sharks, and finfish thereby reducing sorting time, increasing trawl time, and increasing trawl efficiency, and

WHEREAS recent modifications to the TED have resulted in its safe and easy handling and operation including a device to exclude smaller finfish,

NOW, THEREFORE BE IT RESOLVED, that the South Carolina Wildlife Federation Board of Directors at its meeting November 13, 1985 urges the South Carolina Wildlife and Marine Resources Commission on the state level and the National Marine Fisheries Service on the federal level to require the use of the TED on all medium and large shrimp trawlers to (1) protect endangered species, (2) reduce the mortality of sea turtles, (3) conserve the finfish resource currently being discarded in South Carolina waters, and (4) promote efficiency in the shrimp trawling industry in an environmentally beneficial manner.

Adopted November 13, 1985.

AN AFFILIATE OF
NATIONAL WILDLIFE FEDERATION



NATIONAL WILDLIFE FEDERATION, 1412 Sixteenth Street, N.W., Washington, D.C. 20036 (202) 797-6800

Office of the Executive Vice President

April 7, 1986

MEMORANDUM

To: Distribution
 From: Jay D. Hair, Executive Vice President **JDH**
 Re: Trawling Efficiency Devices

The National Wildlife Federation recently passed a resolution in support of the use of trawling efficiency devices (TEDs) on shrimp trawls and support of strong efforts by state, federal, and private interests to educate shrimpers on the use, construction, and value of TEDs to conservation. Our position on TEDs is detailed in the attached resolution.

Attachment
 JDH:rr

Distribution:

John Green	Hugh Swingle
Jose Campos	Omar Munoz-Roure
John Bryson	Robert Martin
Lester Smith	Irwin Alperin
Edwin Joseph	Duane Harris
Robert Mahood	Conner Davis
J. Burton Angelle	John Hodnett
Robert Kemp	Richard Leard
Larry Simpson	Kenneth Hinman
Frank Carlton	Jerry Sansom
Gilbert Radonski	Larry Jahn
Charles Lyles	Greg McIntosh
Robert Thoesen	Alan Allen
James McHugh	Alex Jernigan
Mary Kump	Bethlyn McCloskey
Rollie Franzen	Carl Sullivan
Kristin Vehrs	Pamela Glass
Richard Hoogland	Betty Spence
William Gordon	Carole Allen
Brandt Mannchen	Dede Armentrout
Jukius Collins	Michael Weber

Resolution No. 2

REQUIRING THE USE OF
TRAWLING EFFICIENCY DEVICES (TED)

WHEREAS, about 45,000 sea turtles are caught each year by the South Atlantic and Gulf of Mexico shrimp trawl fishery; and

WHEREAS, about 12,600 of these turtles drown, including the threatened loggerhead and green sea turtle and the critically endangered Kemp's ridley sea turtles; and

WHEREAS, the Kemp's ridley sea turtle has only some 500 turtles nesting annually, making loss of a single mature animal significant to the survival of the species; and

WHEREAS, the National Marine Fisheries Service (NMFS) has developed a Trawling Efficiency Device (TED) which can reduce sea turtle captures by 97% while maintaining shrimp catches equal to standard rigged trawls; and

WHEREAS, the TED can also eliminate other by-catch including jellyfish, horseshoe crabs, rays, sharks, and finfish thereby reducing sorting time, increasing trawl times, and increasing trawl efficiency; and

WHEREAS, recent modifications to the TED have resulted in its safe and easy handling and operation including a device to exclude smaller finfish;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation in annual meeting assembled March 20-23, 1986, in Seattle, Washington, urges appropriate Gulf and Atlantic state fisheries agencies on the state level and the National Marine Fisheries Service on the federal level to (1) conduct an aggressive program to educate shrimp fishermen on the use, construction, and value to fishery and turtle conservation of TEDs, including providing TEDs at low cost to fishermen for demonstration purposes, and (2) require the use of the TED on all medium and large shrimp trawlers to (a) protect endangered species, (b) reduce the mortality of sea turtles, (c) conserve the finfish resource currently being discarded in coastal and offshore waters, and (d) promote efficiency in the shrimp trawling industry in an environmentally beneficial manner.

SIERRA CLUB



GULF COAST REGIONAL CONSERVATION COMMITTEE

Louisiana, Mississippi, Alabama, Georgia, and Florida **Gulf Coast Regional Conservation Committee Resolution** **Turtle Excluder Devices**

Whereas the Kemp's Ridley Sea Turtle is a native species and is listed as endangered by the U.S. Fish and Wildlife Service;

Whereas the nesting population of this turtle has been reduced from 40,000 in the 1940's to 500 in 1985;

Whereas poaching and predation of eggs on the remaining nesting beach in Mexico has been eliminated as a source of significant turtle mortality;

Whereas approximately 45,000 sea turtles are caught in the South Atlantic and Gulf of Mexico shrimp trawl fisheries each year and 12,000 drown;

Whereas Kemp's Ridley sea turtles along with other threatened and endangered sea turtles are caught and drowned in some of these nets;

Whereas Kemp's Ridley sea turtle strandings have quadrupled in Texas since 1980;
Whereas the National Marine Fisheries Service (NMFS) has developed a Turtle Excluder Device (TED, also known as a Trawl Efficiency Device) which reduces incidental sea turtle catches by up to 97% while maintaining equivalent or greater shrimp catches;

Whereas the TED's can also conserve other important sea creatures like sharks, rays, jellyfish, and crabs while also reducing sorting time and increasing trawling time and efficiency;

Whereas voluntary programs for TED use have not been effectively implemented in the Gulf of Mexico;

Whereas the Gulf Fishery Management Council and the NMFS have obligations to conserve all fisheries;

Whereas the Gulf Fishery Management Council and NMFS have additional obligations under the Endangered Species Act to reduce impacts of fisheries on endangered species like Kemp's Ridley sea turtles;

Therefore be it resolved by the Gulf Coast Regional Conservation Committee that the NMFS and the Gulf of Mexico Fishery Management Council on an emergency basis, draw up mandatory regulations which require the use of Turtle Excluder Devices on all applicable trawlers.

Adopted by unanimous vote on March 2, 1986, by the Gulf Coast Regional Conservation Committee

"NOT BLIND OPPOSITION TO PROGRESS, BUT OPPOSITION TO BLIND PROGRESS"



March 12th 1986

Mr. Michael J. Spear
Regional Director
U.S. Department of the Interior
Fish and Wildlife Service.

PRONATURA, A.C. is a non profit non governmental organization that was created for the conservation of natural diversity and the protection of endangered species in Mexico. Since our foundation one of our major concerns has been the protection of sea turtles and at present we are aware of the adverse effects that shrimp trawlers have on sea turtles as well as many other marine resources.

Convinced that the use of the Trawling Efficiency Device is a very effective way to protect sea turtle populations and considering the continuous and relentless decline of the same, we endorse your efforts to encourage mandatory use of the aforementioned device.

At the same time PRONATURA will promote the use of the Trawling Efficiency Device in Mexico and continue the efforts to achieve an effective system of perpetually protected sanctuaries for nesting turtles in strategic areas in Mexico.

Sincerely yours,

Fernando Rodriguez
Dr. Fernando Rodriguez
Vice-President



**PROGRAMA TORTUGAS MARINAS
INSTITUTO NACIONAL DE PESCA**

March 25, 1986


MR. MICHAEL J. SPEAR
REGIONAL DIRECTOR
U.S. DEPARTMENT OF INTERIOR
FISH AND WILDLIFE SERVICE

As a scientist working on sea turtles for more than 20 years I have been following the history of the sea turtle populations in both coasts of México directly and others indirectly, through published papers, in other countries.

All of the sea turtle species have been declining in this period due to commercial fisheries, poaching, habitat deterioration, etc. We have been working on fisheries management and conservation during this time but the populations follow their fate to extinction. The work has increased in many ways without success and we are doing the last battle to save the more periled creature, the Kemp's Ridley, the U.S. and Mexican efforts have joined since 1978 up to now in the nesting beach of Rancho Nuevo, Tamaulipas but nevertheless of the intense work the recovery and enhancement of this sea turtle is not visible up to now. Poaching was extirpated on the beach but in the sea the turtles of any age are drown by the shrimp trawlers in impressive numbers, too much for the Kemp's Ridley population.

The trawling Efficiency Device could be an opportunity to increase the possibilities to save the Kemp's Ridley. I as a fisheries biologist like the use of the TED and I would like to see this gear in every shrimp trawler boat along the geographical distribution of the species. I endorse the efforts of the U.S. Fish and Wildlife Service to reinforce legally the use of this device.

Sincerely


E. C. René Márquez M.



Center for
Environmental
Education

EXHIBIT R

TO: Interested conservation parties
FROM: Mike Weber *MW*
RE: Shrimp/turtle negotiations, meeting 1
DATE: 20 October 1986

On October 16 and 17, representatives from the shrimp industry, the National Marine Fisheries Service (NMFS), and environmental organizations met in New Orleans, Louisiana, regarding actions necessary for eliminating the capture and drowning of threatened and endangered sea turtles in shrimp trawls in the South Atlantic and the Gulf of Mexico. The meeting was convened at the request of Anthony Calio, Administrator of the National Oceanic and Atmospheric Administration, the parent agency of NMFS. The meetings were mediated by Mr. Larry Cotter.

A word about Larry's background: Larry was for some years an organizer of longshoremen and warehousemen in Alaska. In particular, he helped organize workers in fish processing plants. He gained the confidence of both labor and management in these efforts. He has been a member of an advisory panel to the North Pacific Fishery Management Council, and was recently appointed a member of the Council itself. He recently ran for public office in Alaska. In this race, he was endorsed by the Alaska Environmental Coalition.

Under the groundrules of the mediation, the environmental and industry teams were to include five members, who could be assisted by an advisory panel. As it turns out, there will be at least six members to each team. The shrimpers group has asked for a seventh member to represent inshore fishermen in Texas. For this first meeting, I asked the following individuals to participate on our team:

- Michael Bean, Environmental Defense Fund, authority on national wildlife law, and participant in previous meetings on this issue.
- E.C. Brickleyer, Jr., University of Washington, who has worked on this issue for many years with a variety of organizations.
- Vance Hughes, who was formerly the head of the Department of Justice's Division of Wildlife and Marine Resources and currently with the Washington, D.C. office of Kilpatrick and Cody.
- Milton Kaufman, member of the U.S. Sea Turtle Recovery Team and Secretary of the Wider Caribbean Sea Turtle Recovery Team.



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- George Mannina, former Counsel for the Minority on the House Committee on Merchant Marine and Fisheries, and now with the Washington, D.C. office of O'Connor and Shannon.

The largest part of the two days was taken up with briefings by NMFS staff. These briefings discussed the Endangered Species Act, the status and distribution of sea turtle populations and data on their incidental capture, the distribution and status of the Kemp's ridley population, the development and testing of the NMFS TED, the testing of several other excluder devices, the distribution of shrimp effort in the South Atlantic and the Gulf of Mexico, and the effect of oil rig removals in the Gulf on sea turtles.

The presenters distributed written materials, principally tables and histograms, with their presentations. Other materials were distributed beforehand. I list all of these materials below together with their length. If you would like copies, please let me know.

- Kemp's ridley distribution and captures, 15 pages
- Gulf and South Atlantic shrimp effort, 37 pages
- NMFS TED testing, 31 pages
- incidental capture of sea turtles, 20 pages
- a draft report entitled, "Analysis of Sea Turtle Captures and Mortalities Aboard Commercial Shrimp Trawling Vessels", 46 pp.
- a memorandum entitled, "Catch and Status-of-Stock Report on Sea Turtles in the Southeast", 43 pages.

It was generally agreed that the data should be broken down into smaller geographic areas than just the Western, Central, Eastern Gulf and South Atlantic.

The second day was distinguished by a lengthy discussion of the requirements of the Endangered Species Act. Among other things, this discussion, led by George Mannina and Michael Bean, emphasized the responsibility and authority of the federal government to compel a solution to the shrimp/turtle conflict.

The meeting ended with an agreement on the following objective:

To reduce the by-catch mortality of endangered and threatened sea turtles in the South Atlantic and Gulf of Mexico shrimp fisheries as near to zero as possible, while avoiding, to the greatest extent possible, adverse economic impact to the shrimp industry.

The group agreed that the loss of finfish in the shrimp fishery will be open for discussion.

The group also developed a list of issues for discussion. This list is attached. The exact definition of many of these issues awaits further discussion.

The group agreed upon the time and place of the second and third

meetings. The next meeting will begin at 9:00 am on October 31 and will conclude by 4:00 pm on November 2 and will be held on Jekyll Island near Brunswick, Georgia. The third meeting will be held in Washington, D.C. from November 10 through 13.

If you have any questions, please let me know.

Issues in the Mediation of the Shrimp/Turtle Conflict

I. Excluder gear

- mandatory or voluntary use
- who, where, and when
- definition of excluder gear
- acceptable excluder gear size and types
- process for certifying new excluder gear designs
- performance criteria
- training in use of excluder gear
- safety
- cost
- liability for gear loss or conflicts
- damage to gear
- availability of gear

II. Time and area restrictions

- location, depth, extent of area
- definition of restrictions

III. Timeframe for implementation

IV. Other mortality factors

- oil rig removals
- human habitat problems, e.g. artificial lighting
- other fisheries
- international activities
- commercial exploitation and poaching

V. Education/Communication

VI. Enforcement

- observers

VII. Miscellaneous

- protection in the fishery conservation zone
- role of the states
- shrimp imports
- turtle enhancement opportunities

VIII. Mitigation

- hatcheries
- research

IX. Research and data

- verification that program is working
- monitoring
- observers

- future TED designs
- data collection
- strandings

X. Funding

- liability for gear damage
- reimbursement for gear loss
- funding for excluder gear purchases
- methods of funding education and training
- methods of funding enhancement activities
- methods of funding research



Center for
Environmental
Education

EXHIBITS

TO: Interested conservation groups
FROM: Mike Weber *Mike*
RE: Shrimp/turtle negotiations, meeting 2
DATE: 6 November 1986

From October 31 through November 2, negotiating teams from the shrimp industry, the federal government, and the environmental community held a second meeting to discuss mandatory use of Trawling Efficiency Devices (TED). These meetings were held on Jekyll Island, Georgia.

The environmental team included Bo Bricklemeyer, Vance Hughes, Bruce Jalladagian, Milton Kaufman, George Mannina, and myself. The industry team included Leonard Crosby, David Eynard, Eldon Greenberg, Charles Lyles, Tee John Mialjevich, and Robin Sanders. The National Marine Fisheries Service (NMFS) was represented by Jim Douglas, together with scientific and management staff from Washington and the southeast region. The mediator was Larry Cotter.

The third round of meetings will be held in Washington, D.C. at NMFS headquarters. These meetings will begin at 1:00 p.m. on Monday, November 10 and continue until Wednesday, at least. These meetings are open to the public.

Summary of the Second Round of Meetings

The first day of the meetings was taken up with the presentation and review of information developed by the National Marine Fisheries Service (NMFS) at the request of the negotiating teams. Copious written materials accompanied these presentations. The most important of these materials are the following:

- Selected References Involving the Incidental Catch of Sea Turtles by the Shrimp Industry,
- Analysis of Sea Turtle Captures and Mortalities Aboard Commercial Shrimp Trawling Vessels,
- Incidental Catch and Mortality Report, Final Report, November 1982, by Roithmayr and Henwood,
- Graphs showing monthly measures of shrimping effort and catch by statistical zone,
- Histograms and other information regarding frequency of gear types and regarding state shrimp laws,
- Sea Turtle Stranding and Salvage Network Data Summary, October 1986,
- Options for mandating TED use in the South Atlantic, presented to the South Atlantic Fishery Management Council,

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- Distribution of sea turtle captures in NMFS trawl studies,
- Distribution of recaptures of tagged headstarted Kemp's ridley sea turtles,
- Long distance tag returns of Kemp's ridley females tagged at Rancho Nuevo, Mexico, 1966-1984,
- Profile of the Kemp's ridley and its conservation status,
- Report from the Turtle Excluder Device Workshop, October 23-24, 1986.

The meetings on Friday ended just as the negotiations seemed ready to stall with persistent questioning of the information by the industry. The environmental team then met for several hours and prepared a comprehensive proposal on the definition of a TED and the process for certifying TED designs for presentation at the next day's meeting.

The next morning's discussion began with consideration of the areas in which the TED would be required. The mediator, Larry Cotter, suggested that we break the Gulf and South Atlantic in areas of primary concern and areas of secondary concern. As the group faltered in synthesizing the copious information presented the day before, the meeting broke up with a working committee assigned to develop a protocol for displaying the information provided by NMFS in a tabular form.

Weber and Bricklenyer then joined David Eymard and Eldon Greenberg from the industry team to develop this protocol with the assistance of NMFS staff. The tables were to summarize the various types of information on incidental catch and shrimp effort by statistical zone. There are 35 statistical zones. Zones 1-21 are in the Gulf and run from the Florida Keys to the Mexican border; zone 13 is at the mouth of the Mississippi River. Zones 24-35 run from the Keys to just north of Cape Hatteras, North Carolina. Zone 31 covers most of the Georgia coast.

When the entire group met again, they accepted the protocol developed by the committee and asked NMFS staff to prepare individual tables for Kemp's ridley, loggerhead, and green sea turtles in the South Atlantic and in the Gulf. These tables are attached together with an explanation.

While NMFS staff were preparing these tables, the negotiating teams met to discuss our comprehensive proposal on a definition of excluder gear and the process of excluder gear certification. By 9:15 in the evening, the negotiating teams had developed a general agreement on TED criteria and certification, but acknowledged that several issues remained unresolved. The status of our discussions is as follows:

Turtle Exclusion: The group agreed that TEDs should achieve a 97 percent reduction in turtle capture in areas where they are used. When tests are conducted on a TED that is meant to be used in areas where there are only smaller sea turtles, the capture of a larger sea turtle will not be counted in the test results.

Finfish Exclusion: We proposed that TEDs reduce finfish capture by 50 percent. The industry disagreed with the consideration of this criterion.

Shrimp Retention: The industry suggested that TEDs should be required to cause no shrimp loss, if they must also reduce finfish by-catch.

Compliance: We originally suggested that any excluder device be permanently affixed to the net. Industry felt this was unnecessary. We agreed that this was simply part of a broader issue of how the design of a device should contribute to insuring compliance with regulations requiring its use.

Size of Opening: We agreed that the size of the opening in the net through which a turtle would be excluded should be large enough to allow the exclusion of the largest size of turtle that would be encountered in an area.

Size: We agreed that a design may be certified only at a particular size. A larger or smaller version of the same design will require an additional certification.

Design Description: We agreed that when a device has been certified, a written description and illustration of the device will be published in the Federal Register.

Safety: The issue of determining the safety of a device was mentioned but not discussed.

Excluder Bars: We agreed that if a device uses bars to exclude sea turtles, the bars should be spaced no farther than 4 inches apart in order to insure that small sea turtles will be excluded. On devices that do not use bars, but wide mesh net for instance, the openings in the net should be small enough to prevent small turtles from going past the excluder barrier. We suggested that the slope of bars in a device relying upon bars for exclusion be no less than 37 degrees and no greater than 45 degrees. We agreed to leave the determination of minimum and maximum slope to gear specialists for the time being.

Certification: We suggested a variety of factors to be included in the development of a protocol on certifying devices, including length, number, and location of test tows, and measurement of turtle, finfish, and shrimp exclusion. We agreed that NMFS will develop protocols to test a device's ability to exclude turtles and finfish and to retain shrimp. These protocols are to be presented at the next meeting.

Experimentation: Industry wanted the flexibility to use innovative designs in areas where TEDs are required. We suggested that such activities should be conducted under a research permit. NMFS will provide options at the next meeting.

Product Liability: Industry requested a briefing on product liability as it relates to TEDs. NMFS will present such a briefing at the next meeting.

The final day of the meeting opened with our proposal regarding areas of primary and secondary concern. We proposed that statistical zones 1 through 4, 7, and 11 through 21 in the Gulf and zones 28 through 33 in the Gulf be considered areas of primary concern based on level of sea turtle captures and strandings, availability of suitable sea turtle habitat, historical distribution, and level of shrimping effort. In the Gulf, these areas extend roughly from the Florida Keys to just south of Sarasota, from Cedar Key to Apalachicola, and from Mobile Bay to the Mexican border. On the Atlantic coast, our proposal extends from Melbourne, Florida to Ablemarle Sound, North Carolina.

We had time to discuss our Gulf proposal only. The industry agreed that statistical zones 13 through 21 should be considered a primary area (from the Mississippi River delta to the Mexican border), but not zones 1 through 4, zones 11 and 12, or zone 7. We insisted that zones 1 through 4, zone 7, and zones 11 and 12 remained on the table for discussion.

The industry proposed that TEDs be required only within the ten fathom line in primary areas and only during certain seasons, without specifying the seasons. We agreed to review the data to determine whether these adjustments would risk capture of turtles, particular adult female Kemp's ridleys. We insisted that both inshore and offshore waters were included in the zones of concern. Inshore areas are those behind barrier islands, while offshore areas extend outward from the beach. The industry expressed considerable concern about our proposal on including inshore areas.

The industry also proposed that TEDs be required in primary areas in 1988 and that in 1987 tow times be restricted to two hours. We countered that TEDs should be required in primary areas by May 1987, and that we would have to review the data before accepting tow time restrictions as effective means for reducing sea turtle mortality.

The industry also proposed that between implementation and 1990 there be a program to gather additional information on shrimp catch and turtle captures and that in 1990 there be a review of regulations requiring TEDs. We countered that any review should occur in 1989 and should be conducted only if the subject and criteria for review were clearly specified beforehand, if an appropriate design were developed for gathering requisite information, and if adequate funding could be assured.

Finally, the group agreed to review a variety of other issues at the next meeting, if possible. NMFS was asked to prepare a review of available legal authorities under which the federal government might place embargos on shrimp from countries not requiring a similar conservation program for sea turtles. NMFS will also suggest means of immunizing from prosecution shrimp fishermen who capture an endangered sea turtle while using a TED. The group will also review other sea turtle mortality factors, enforcement aspects, needing monitoring and research activities, and funding.

The meeting adjourned at 3:30 p.m. on November 2.

EXPLANATION TO TURTLE INCIDENTAL CATCH TABLES

The following tables summarize information made available by NMFS staff to the environmental and shrimp industry negotiating teams at their recent meetings in Georgia. There are individual tables for loggerhead, green, and Kemp's ridley sea turtles in the Atlantic, and individual tables for the same species in the Gulf of Mexico. Below, I will explain the types of information that are displayed in each of the columns, beginning at the far left. Please note that these tables are of limited use since they do not adequately convey the variable value of the information.

Stat Zone: This column refers to the shrimp statistical zone to which the following information in the table applies. The statistical zones for the Atlantic and Gulf are displayed on the maps following this page.

Obs Catches: This column refers to the number of sea turtles that were captured during trawl studies conducted by NMFS.

CPUE/100 ft net hours: Where two numbers are given in this column, the righthand number refers to the total number of hours that NMFS researchers trawled in the statistical zone as part of the studies mentioned above. Because net sizes varied during the study, these hours are standardized to trawling with the equivalent of a net with a 100 foot headrope. The number on the left is the catch per unit of effort (CPUE), that is, the number of turtles caught for every hour of trawling in the studies. This CPUE results from the number of observed catches found in the "Obs Catches" column divided by the number of hours trawled.

Strandings: This column shows the total number of sea turtles stranded on beaches in the zone from 1980 to 1986. One asterisk indicates an area where effort to find stranded animals was incomplete from 1980 to 1986. Two asterisks indicate that effort to find stranded animals in a zone increased significantly in 1986.

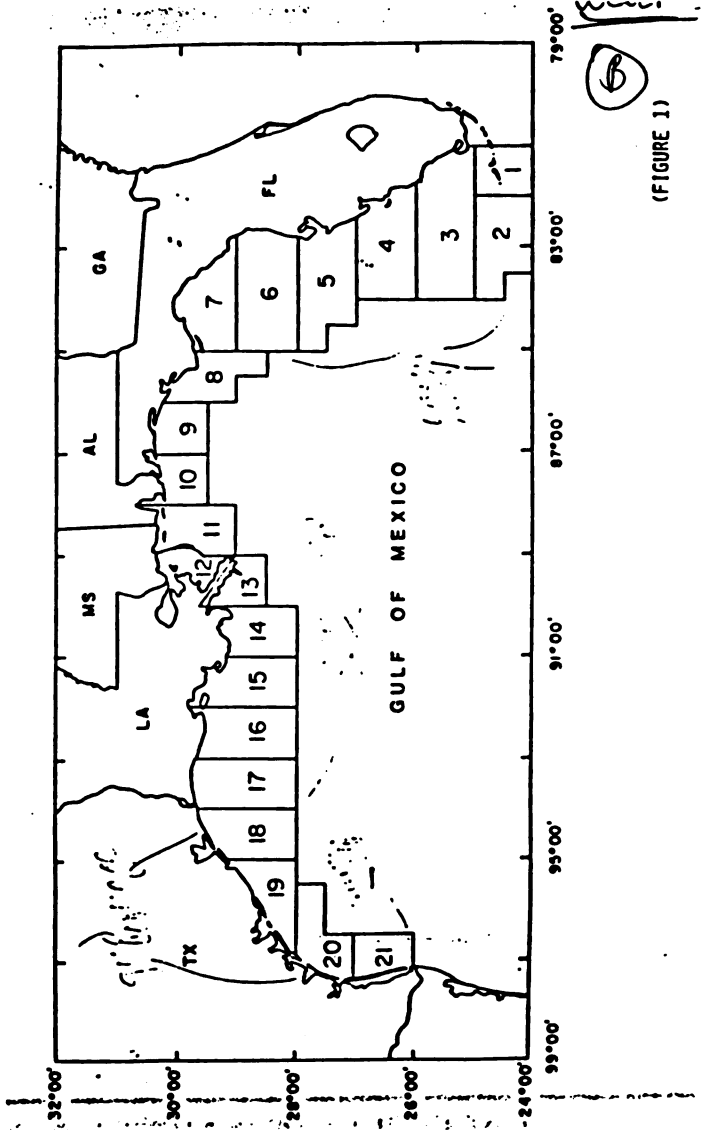
Head Start Recaps: Kemp's ridley sea turtles that are headstarted at NMFS Galveston Laboratory are tagged before being released. This column shows the number of such headstarted animals that were later captured at sea in the statistical zone.

Wild Tag and Recaptures: Before adult female Kemp's ridleys return to the water after nesting at Rancho Nuevo, they are tagged. This column shows the number of such tagged animals that were later captured at sea in the statistical zone.

1985/5 Yr Avg Fishing Effort: This column provides measurements of fishing effort in each statistical zone. The measurement is the number of 24-hour days of trawling in the zone, standardized to a 100-foot net. The lefthand column shows the number of days in thousands trawled during 1985; the lefthand figure shows the average number of days in thousands trawled during each of the last five years.

Natural History: The last two columns give an indication of the importance of a statistical zone for the particular species of sea turtle based on the habitat and the natural history of the species. The righthand column refers to the period before 1980, and the lefthand column refers to the period after 1980. Each column is further divided between adult and juvenile.

Mark H. ...
11/6/86



KEMP'S RIDLEY
GULF OF MEXICO

STAT ZONE	OBS CATCHES	CPUE 100ft net hours	STRANDINGS	HEAD START RECAPS	WILD TAG & RECAPS	1952/58 AVG FISHING EFFORT	NATURAL MISTAKEN (HISTORICAL) (EC)	Adults	
1	0	/430	0*	49*	2/0	1/41	1/2	N	
2	0	/1534	0*			11/13	1/ND	N	
3	0	/360	0*			3/3	1/ND	N	
4	0	/180	4			2/2	1/ND	N	
5	0	/6	5	56	1	1/1	1/ND	N	
6	0	/42	0*			1/2	1/2	N	
7	0	/37	0*		0/143	2/3	1/3	ND/	
8	0	/34	4*		0/3	4/12	1/ND	ND/	
9	0	/0	0*	4		C/C	1/ND	N	
10	0	/75	0*		3/0	0/0	2/ND	ND/	
11	0	/1098	3*		5	7/15	11/12	2/ND	ND/
12	0	/386	1*		4/0	5/6	2/ND	ND/	
13	0	/1267	17*	56	16/0	11/17	3/ND	ND/	
14	0	/553	4*		12/0	13/11	3/ND	ND/	
15	0	/1119	2*			20/21	3/ND	N	
16	2	0020/1008	3*			14/16	3/ND	N	
17	0	/613	95**	18/18		1/ND	ND/		
18	2	0003/3743	200**	322	10/13	1/ND	ND/		
19	2	0001/3056	28*		17/19	1/ND	N		
20	0	/662	80		9/10	1/ND	ND/		
21	0	/368	14*		10/12	1/ND	N		
	total catch over observer/ testing effort 1973-1984		1980-1986 data rec'd as of 10/86	* includes east coast of FL	1204 = 1941-84 full time 1st time	1000 1000 days days ↓ standardized to 100ft net hours	Relative Imports 1 minimum 2 moderate 3 maximum	ND - no data	
	EX: A- Table 4		EX: B-2 Table 1	* incomplete coverage prior to 1986					

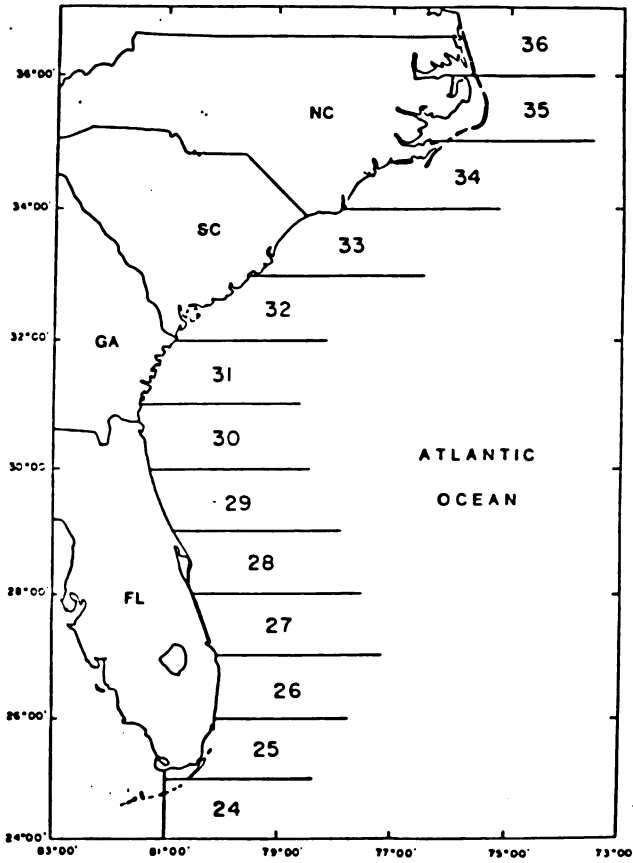
LOGGERHEADS
GULF OF MEXICO

STAT ZONE	OBSERVE CATCH	CPUE 100 ft. net hrs	STAND	WILD RECAPT	FISH EFFORT — — MBS 5-YR AVE	NATURAL HISTORICAL	IMPORTANCE
1	4	0043 430	16*	3	1 <1	3	
2	4	0026 1534	0*		11 13	3	
3	3	0053 360	2*		3 3	3	
4	1	0056 180	94	3	2 2	3	
5	0		6 158	2	1 1	2	
6	0		42 10*		1 2	2	
7	0		37 10*	5	2 3	2	
8	0		34 53*	2	<1 2	2	
9	0		0 9*		0 0	2	
10	0		75 7*		0 0	2	
11	4	0036 1098	25*	2	118 18	2	
12	2	0052 386	0*	1	145 176	2	
13	1	0009 1267	3*		118 17	2	
14	1	0018 553	3*		13 20 11 24	2	
15	1	0009 1119	1*		14 16	2	
16	4	0040 1008	1*		18 18	2	
17	1	0012 813	27**		18 18	2	
18	5	0013 3743	81**		10 19	2	
19	7	0023 3086	74**		19 19	2	
20	2	0030 662	317		9 10	2	
21	2	0054 368	80*		10 12	2	
		obsrv. effort in 100 ft. net hours	1980 - Out MBS # in com. coverage if inc com. coverage until MBS	Tangled animals caught at sam. Data incomplete	thousand days	Relative Importance — — — 1 minimum 2 moderate 3 maximum	

Gulf of Mexico - Green Turtles

STATION	OBSERVER	C.P.U.E. 100 ft. net hours	STRAND	WILD RECAPT	FISH CATCH 1985	5-YR AVE	NATURAL HISTORICAL VALUE	1985-86 1986-87 1987-88
1	0	430	18*	NO	1	21	3	
2	0	1534	1*		11	13	3	
3	0	360	0*		3	3	3	
4	0	180	4		2	2	3	
5	0	6	7		1	1	3	
6	0	42	4*		1	2	3	
7	0	37	2*		2	3	3	
8	1	.0300/34	1*		21	2	1	
9	0	0	0*		0	0	1	
10	0	75	1*		0	0	1	
11	0	1098	4*		11	12	1	
12	0	386	0*		5	6	1	
13	0	1267	1*		11	17	NO	
14	0	553	0*		13	11		
15	0	1119	0*		20	21		
16	0	1008	0*		14	16		
17	0	813	1**		18	18	NO	
18	1	.0003/3743	5**		10	13	1	
19	0	3056	9*		17	19	1	
20	0	462	27		9	10	1	
21	0	368	8*		10	12	1	
		observed effort in 100 ft. net hours	* incamp late coverage ** incamp until 1986	No data	days x 1000	Relative Importance	1 minimum 2 moderate 3 maximum	

74-992 841



(FIGURE 5)

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STAT ZONE	OBSERVER CATCH	CPUE 100 ft net hrs	Strand	FISHING EFFECT 1985	Wild Recapture	NATURAL HISTORY Adult Juvs		
24	0	1/48	22	0		1	3	
25	0	1/48	19	0		3	3	
26	0	1/48	66	0		3	3	
27	0	1/48	111	0		3	3	
28	3	0138/211	28	0.8	(20 Canaveral)	3	3	
29	0	1/48	9	0.9		2	2	
30	0	1/48	11	3.2		1	1	
31	3	0005/281	5	4.0		1	1	
32	0	1/451	3	2.5		1	1	
33	3	0019/1537	6	0.9		1	1	
34	0	1/0	10	1.3		1	1	
35	0	1/0	5	0		1	1	
36	0	1/0	0	0.2		1	1	
		CPUE/observed effort /100 ft net hrs	1980 - Oct 86 reports	Thousand days	Tagged animals caught at sea	Relative Importance 1 minimum 2 moderate 3 maximum		



Center for
Environmental
Education

EXHIBIT I

TO: Interested conservation groups
FROM: Mike Weber
RE: Shrimp/turtle negotiations, meetings 3 and 4
DATE: 7 December 1986

Since I last reported to you, the environmental, industry, and government negotiating teams have held two additional meetings. The third meeting of the parties was held November 10-12 in Washington, D.C. I have attached the minutes of that meeting prepared by Larry Cotter, the mediator of the negotiations. These minutes are accurate for the most part.

The fourth and final meeting was held December 1-4 in Houston, Texas. At this meeting, the parties reached an agreement in principle upon the phasing in of TED use in the shrimp fishery. During the next two weeks, the parties will be developing the language of proposed regulations to implement the agreement. The National Marine Fisheries Service (NMFS) intends to have proposed regulations and a draft environmental impact statement available for public comment by the end of January. Public hearings will likely be held in the Southeast from the end of January through February.

Below, I summarize the principal elements of the agreement reached at the fourth meeting. Please regard this reconstruction of the agreement as a draft. I am providing this summary so that you will have a general idea of the agreement.

PHASING

The agreement proposes that the use of TEDs be phased in over a period of three years. The agreement treats the Gulf of Mexico separately from the South Atlantic, and treats inshore areas separately from offshore. In identifying areas for TED use in the Gulf and South Atlantic, we use the shrimp statistical zones, which are depicted on the attached maps.

OFFSHORE

Gulf of Mexico

Phase I: Effective July 15, 1987

- A) TED's required in depths less than 10 fathoms year round in Zones 1 through 4, and from March through November in Zones 11 through 21. (NOTE: The period during which TEDs are required

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may be altered to April through December in zones 11-17, pending determination of the prime finfishing months in Louisiana. Also, all of Mobile Bay will be included in the TED requirement).

- B) If sufficient TEDs are unavailable between July 15, 1987 and December 31, 1987, a fisherman may be granted a waiver from the TED requirement; however, TEDs shall be mandatory effective January 1, 1988 regardless of availability.
- C) We recommend to Texas Parks and Wildlife Department that the 0-4 fathom exemption during the Texas closure be eliminated unless TEDs are required on all vessels participating in that fishery regardless of headrope length.

Phase II: Effective January 1, 1989

- A) The TED requirement is extended to 15 fathoms in all zones as defined in Phase I above, except there shall be no fathom limitation in Zones 1 and 4, and Zones 13, 14, and 15.

Phase III: Effective January 1, 1990

- A) A mandatory review of the regulations by the working group shall be completed by January 1, 1990.
- B) In the absence of mutual agreement by the working group in the mandatory review:
 - 1) NMFS shall extend the mandatory use of TEDs, commencing July 15, 1990, to encompass 80 percent of the Gulfwide effort in the event that a Gulfwide combination of mandatory and voluntary use of TEDs has not reached 80 percent of the fishing effort on the basis of the best currently available data;
 - 2) If the level of mandatory and voluntary TED use is greater than 80 percent, NMFS shall continue to annually review the extent of TED use Gulfwide; in the event any review establishes a level of use less than 80 percent, subparagraph 1 above shall be implemented.
- C) If NMFS determines that Mexico has achieved comparable utilization of turtle excluding gear and there is reliable, verified evidence that utilization is comparable to that required in the U.S., Phase III shall not be implemented except for the mandatory review.

The Louisiana Variable

If the representative of the Concerned Shrimpers of Louisiana is willing to sign and endorse the entire agreement, the following provision shall be incorporated into the agreement. If the representative is unwilling to sign and endorse the entire agreement, the following provision shall not be incorporated into

the agreement.

"NMFS will determine the median rig size of all boats/vessels licensed or registered in Louisiana (including inshore and offshore waters) that would otherwise be subject to a TED requirement as defined in the proposed Gulf of Mexico agreement. Boats/vessels licensed or registered in Louisiana as of October 1, 1986 pulling the smaller 50 percent of rigs will be exempt from otherwise applicable TED requirements while fishing in statistical zones 12 through 17 until July 15, 1989 if such boat/vessel displays the appropriate proof of licensing or registration issued by Louisiana/NMFS establishing that it qualifies for the exemption."

Net Exemptions

- A) A vessel pulling a single net with a headrope of 30 feet or less, or no more than two nets with a 30-foot headrope or less which are not connected to each other, shall not be required to pull TEDs.
- B) A single test net of 20-foot headrope length or less which is independent of the main trawls shall also be exempted.

South Atlantic

Phase I

- A) Zone 28
 - 1) Effective July 15, 1987, TEDs will be required in all depths year round.
 - 2) If sufficient TEDs are unavailable between July 15, 1987 and December 31, 1987, a fisherman may be granted a waiver from the TED requirement. However, TEDs shall be mandatory effective January 1, 1988, regardless of availability.
- B) Zones 29-34
 - 1) Effective January 1, 1988, TEDs will be required in all depths from May through August.

Phase II: Effective January 1, 1989

- A) Zones 29-34
 - 1) If the combination of mandatory and voluntary use of TEDs during the month of April 1988, and in each succeeding April, does not encompass at least 80 percent of fishing effort, the mandatory use of TEDs shall additionally be required during the month of April in the subsequent year and thereafter.

- 2) If the combination of mandatory and voluntary use of TEDs during the month of September, 1988, and in each succeeding September, does not encompass at least 80 percent of fishing effort, the mandatory use of TEDs shall additionally be required during the month of September in the subsequent year and thereafter.

Phase III: Effective January 1, 1990

- A) A mandatory review of the regulations by the working group shall be completed by January 1, 1990.
- B) In the absence of mutual agreement by the working group in the mandatory review:
 - 1) NMFS shall extend the mandatory use of TEDs, commencing July 15, 1990, to encompass 80 percent of the South Atlantic effort in the event that a South Atlantic combination of mandatory and voluntary use of TEDs has not reached 80 percent on the basis of the best currently available data;
 - 2) If the level of mandatory and voluntary use is greater than 80 percent, NMFS shall annually thereafter continue to review the extent of use in the South Atlantic. In the event any review establishes a level of use less than 80 percent, subparagraph 1 above shall be implemented.

Rock Shrimp and Royal Red Shrimp

- A) This provision applies to zones 28 through 34.
- B) Vessels that prosecute the rock shrimp or royal red shrimp fisheries shall be exempt from the TED requirement providing the percentage of rock shrimp and/or royal red shrimp delivered in proportion to the total shrimp catch shall be at least 90 percent.

Net Exemptions

- A) A vessel pulling a single net with a headrope of 30 feet or less, or no more than two nets with a headrope of 30 feet or less which are not connected to each other, shall not be required to pull TEDs.
- B) A single test net of 20-foot headrope length or less which is independent of the main trawls shall also be exempted.

INSHORE

(NOTE: The inshore area is considered to be those waters behind barrier islands in within bays. The exact definition will be the subject of further discussion.)

Effective Dates: TEDs shall be mandatory in all inshore areas according to the following effective dates and exemptions.

- A) South Atlantic: January 1, 1988
- B) Gulf of Mexico: July 15, 1988

Gulf of Mexico and South Atlantic Exemptions

- A) A vessel pulling a single net with a 30-foot headrope or less, or no more than two nets with a 30-foot headrope or less which are not connected to each other, shall not be required to pull TEDs.
- B) A single test net of 20-foot headrope length or less which is independent of the main trawls shall also be exempted.
- C) The effective date in the double rig area in the Breton and Chandeleur areas of Louisiana in Zone 12 shall be the same as Phase 1, offshore (i.e., July 15, 1987), in all particulars.
- D) In inshore sounds and bays in Zones 28 through 34, TEDs shall be required.
- E) The working group was presented with insufficient information to develop a recommendation with respect to the cause of sea turtle mortalities in the inshore waters of North Carolina and whether extension of the TED requirement to those areas is appropriate at this time. It is therefore recommended that the Secretary direct NMFS to address the issue prior to issuance of the proposed rules and invite public comment as to whether TEDs should be required for shrimp vessels in that area.

EXCLUDER GEAR

Currently Acceptable TEDs

The negotiating teams accepted as adequate excluder gear the NMFS TED, the Georgia Jumper, the Texas TED, and the Cameron Aluminum Excluder.

Certification Process

The negotiating team agreed upon a process through which new designs could be tested, using testing protocols submitted by NMFS. While information would be collected on shrimp retention and the exclusion of other marine life, including finfish, the ability of a device to exclude sea turtles at a 97 percent rate will be the criterion for determining which devices will be tested. Other considerations include cost and safety. Once certified, a description of a device and an illustration will be published in the Federal Register.

Performance Criteria

Certified TEDs will have to exclude 97 percent of the largest and smallest turtles likely to be encountered in the area in which that design will be permitted. In the Gulf of Mexico, the maximum over the carapace measurement is 32 inches and in the South Atlantic it is 35 inches. The minimum size turtle to be excluded will have a carapace length of six inches.

RESEARCH

The principal focus of research over the next several years is the determination of compliance of the fleet with the TED requirements and measurement of voluntary use of TEDs in zones where TEDs are not required. This research will be conducted as part of NMFS' ongoing collection of information about shrimp effort. However, there will be expanded efforts to interview more boat rather than vessel captains and to verify this interview data by means of at sea observation.

INTERNATIONAL PROGRAM

Bilateral Agreements

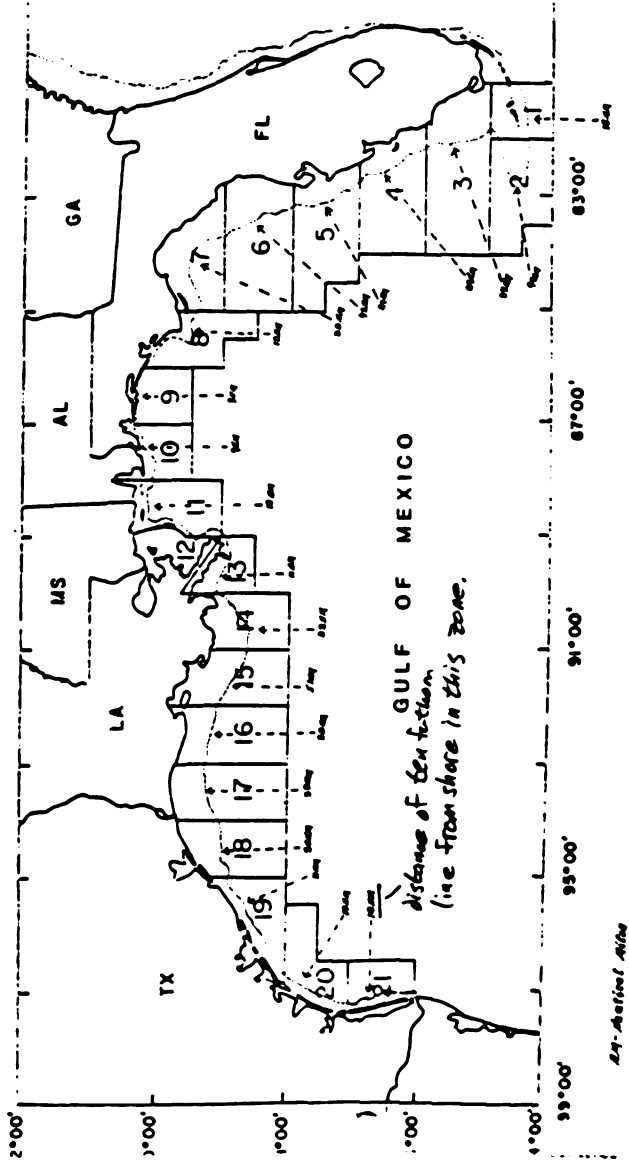
The Secretary of State in consultation with the Secretaries of Commerce and of the Interior shall take appropriate action to achieve bilateral or multilateral sea turtle conservation agreements, or other appropriate agreements, with Mexico and other countries that have fisheries which result in the incidental taking of sea turtles. Necessary funds to carry out such efforts, including funds to implement the Cartagena Convention shall be made available for this purpose.

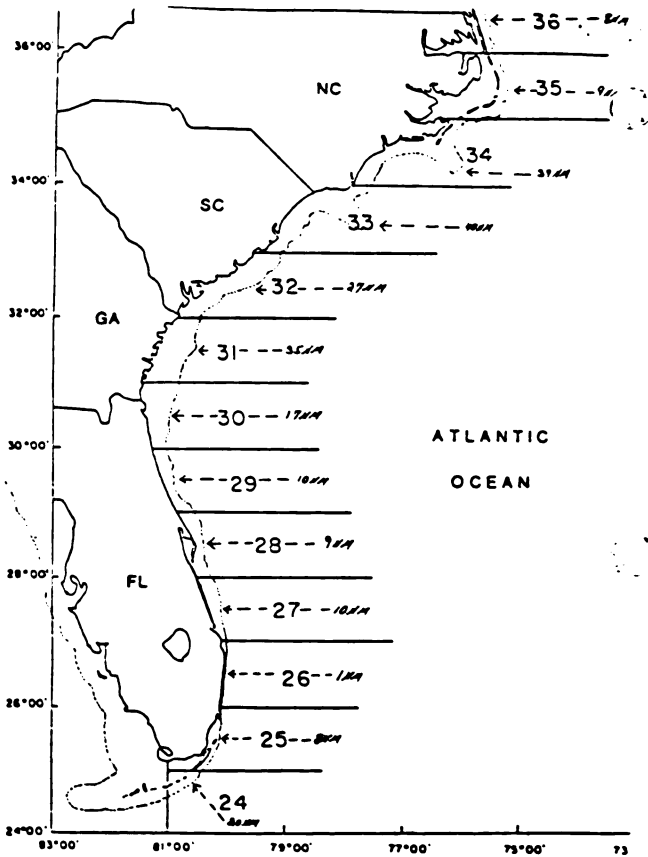
Domestic Legislative Amendments

All interested organizations, government and nongovernmental, should recommend appropriate statutory amendments authorizing the Secretary of Commerce to ban the importation of shrimp and other marine living resource products into the U.S. from nations that do not have, and enforce turtle conservation regulation comparable to those of the U.S.

Shrimp Statistical Zones
 The dotted line paralleling the shore denotes the ten fathome curve.

WEB





NA - Nautical Miles

6 EBERK

ABBREVIATED MINUTES
OF
NEGOTIATION SESSION
BETWEEN
NATIONAL MARINE FISHERIES SERVICE, SOUTH ATLANTIC AND
GULF OF MEXICO SHRIMP INDUSTRY, AND THE
ENVIRONMENTAL COMMUNITY

NOVEMBER 10 - 13, 1986
WASHINGTON, D.C.

NOTE: These Minutes are abbreviated and do not contain all aspects of the reports received, the discussions or exchange of dialog which took place during the course of the meeting.

I. COMMITTEE ATTENDANCE:

The session was called to order at 1:00 P.M. Representatives in attendance were:

Mediator

Larry Cotter

Industry Representatives

Leonard W. Crosby, Jr.
David Eymard
Charles H. Lyles
Tee John Mialjevich
Robin Sanders
Eldon V.C. Greenberg

Environmental Representatives

Vance Hughes
George J. Mannina, Jr.
Michael Weber
Michael J. Bean
Milton Kaufman
B.J. Jaiidagian

NMFS Representatives

Jim Douglas
Jay Johnson
David Cottingham

II. REPORTS:

A.) Jay Johnson reported on the prospect of prohibiting the

importation into the U.S. of shrimp from countries which do not enact similar turtle saving actions as might be agreed to in this meeting. There are some problems with that approach. Following discussion, Milt Kaufman agreed to write some draft language to address the issue for circulation among the groups.

B.) Jim Douglas reported some money has been allocated to test TED's. It is a defined amount and will only go so far dependent, of course, upon how many TED's are tested. Protocol for TED tests will be available later in week; protocol for shrimp inclusion and fin fish exclusion is being developed.

C.) Chuck Oravetz, Barbara Baker, and Larry Ogdren presented a variety of reports.

III. ENVIRONMENTAL COMMUNITY PROPOSAL

The Environmental community made the following proposal on Nov. 11:

.....

"GULF OF MEXICO

A.) Zones 11 - 21:

1.) Include inshore and offshore.

2.) Agreeable to TED's in depths less than 10 fathoms if TED's are mandatory in depths greater than 10 fathoms during the time period Sept. 1 through Feb. 1; otherwise TED's to be required in depths less than 20 fathoms year round.

B.) Zones 1 - 4:

1.) TED's to be required year round with no depth restriction.

C.) Zone 7:

1.) Drop our proposal.

D.) Effective Date:

1.) July 1, 1987

SOUTH ATLANTIC

A.) Zones 28 - 35:

1.) In any state where night fishing is prohibited and where

page 3

bays and sounds are closed, TED's shall be required April 1 through Sept. 30.

2.) In all other states, TED's shall be required year round.

B.) Effective Date:

1.) The effective date in those states falling under A.) 1.) above shall be June 1, 1987.

2.) The effective date in those states falling under A.) 2.) above shall be May 1, 1987.

NEW TED'S

A.) If a TED is developed which excludes 97% turtles and retains 97% shrimp, use of TED's shall be required in all operational areas in which the new TED has been certified, effective Jan. 1, 1989 or 12 months following the certification of that TED, whichever comes later.

EXISTING TED'S

A.) The four existing TED's shall be grandfathered and deemed to be certified."

.....

During discussion on the Environmental Community proposal the issue whether Mobile Bay would be included in Zone 11 was raised. The Environmental Community stated it is their intent to include the entire Bay in their proposal under Zones 11 - 21.

The Environmental Community explained their "New TED'S" proposal was designed to address the Industry's concern with potential shrimp loss as a result of being required to use TED's and to provide a mechanism through which the Environmental Community's concern to protect turtles could both be accomplished if such a super TED were developed.

IV. INDUSTRY RESPONSE/PROPOSAL:

The Industry offered the following counter proposal:

.....

"GULF OF MEXICO

A.) Zones 11 - 21:

1.) Includes inshore and offshore (including Mobile Bay); except that nets less than 20 feet shall be excluded. (Language detailing the

20 foot net exclusion is to follow.)

2.) TED's mandatory in depths less than 10 fathoms.

3.) In Zones 11 through 17, TED's shall only be required during the months of May, June, July and August.

B.) Zones 1 - 4:

1.) TED's mandatory in depths less than 10 fathoms.

C.) Effective Date:

1.) Offshore - January 1, 1988

2.) Inshore - May 1, 1988

SOUTH ATLANTIC

A.) North Carolina:

1.) No restrictions.

B.) South Carolina and Georgia:

1.) TED's mandatory April 1 through June 30 in depths less than 10 fathoms.

2.) In the event bays are opened to fishing, TED's shall be required regardless of time of year.

3.) Restrictions do not apply to nets less than 20 feet.

C.) Florida:

1.) In Zone 28 TED's shall be required in depths less than 10 fathoms.

2.) Restrictions do not apply to nets less than 20 feet.

D.) Effective Date:

1.) January 1, 1988 coastwide.

NEW TED'S

A.) Reject Environmental proposal.

page 5

EXISTING TED'S

B.) Accept Environmental proposal.

FURTHER REVIEW

A.) Reconvene last quarter of 1988 to review status of regulations. By mutual agreement the parties may recommend modification of regulations.

B.) Reconvene last quarter of 1989 for complete program review."

.....

In its explanation of its proposal, the Industry stated their 20 foot net exclusion was not intended to forge a loop hole, but rather to avoid unnecessary regulation on bait shrimp fishermen and test dragging -- both of which have for very short duration drags.

V. GENERAL DISCUSSIONS

A.) During discussions the Industry expressed its belief their proposal provided for approximately 71% TED coverage of effort in the South Atlantic and 76% TED coverage of effort in the Gulf of Mexico. A data request was subsequently made to determine the level of shrimp effort by fathoms in the Gulf and South Atlantic. In the Gulf, the data was as follows:

ZONES 1 - 21

<u>FATHOMS</u>	<u>EFFORT</u>	<u>FATHOMS</u>	<u>EFFORT</u>	<u>PERCENT</u>
1 - 5	62,389			
6 - 10	35,786	1 - 10	98,175	59%
11 - 15	27,250	1 - 15	125,425	75%
16 - 20	15,258	1 - 20	140,683	84%
21 - 25	8,614			
26 - 30	9,077			
31 - 35	5,534			
36 - 40	3,198	1 - 40	167,106	100%

Data regarding effort in the South Atlantic was also received but was not broken down by the parties or discussed. (This will be done at the Houston meeting.)

B.) The Environmental Community suggested the parties consider adopting a goal of 75% effort coverage. After a caucus, the Industry agreed in concept to use that approach, however the Industry noted the effort data base did not include inshore effort and the Industry should receive some percentage credit for TED coverage which they have agreed will be mandatory inshore.

C.) The Industry noted its earlier proposal to exclude nets less than 20 feet from mandatory TED requirement needs to be modified. Apparently larger nets also fall into the same category and should be exempted. The Industry suggested the exclusion of nets less than 35 feet might be appropriate, however the Industry wished to make it clear they were not attempting to gimmick their earlier proposal.

D.) Jim Douglas distributed and briefly explained the testing protocol for turtle exclusion and TED's.

VI. ENVIRONMENTAL COMMUNITY COUNTER PROPOSAL

"GULF OF MEXICO

A.) Zones 11 - 21, and 1 - 4:

1.) We accept the Industry proposal to require TED use in Zones 11 - 21 and 1 - 4, inshore and offshore, including Mobile Bay; except that nets less than xx feet shall be excluded, with appropriate language to prevent clustering of xx foot nets to avoid the TED requirement, while excluding test and sampling nets of less than xx feet.

2.) We accept the Industry proposal (objective) that TED's would be mandatory in depths within which 75 percent of the fishing effort in the Gulf occurs. In Phase I, 75% is subject to reduction if the Industry shows why economics, fairness, depths, seasons, etc., require a lower initial percent of coverage.

3.) The previous provisions would constitute Phase I, which would become effective on May 1, 1987.

4.) Phase II, effective May 1, 1988, would extend the TED requirement to cover that area in Zones 11 - 21 in which 85 percent of the fishing effort in the Gulf occurs.

5.) Phase III, effective January 1, 1990, would extend to the full statistical zones, unless the parties agree or NOAA determines, on the basis of available data, that endangered turtles in those waters are not at risk of capture by shrimp trawls; however, if the data indicates that Phase III should extend the TED requirement to the full statistical zones, it would be deferred if, through bilateral talks and other means, the United States government persuades the Mexican government to take steps similar to these in order to eliminate the capture of endangered sea turtles in the Campeche shrimp fishery."

.....

During discussion the Environmental Community explained, in reference to number 5, that should Mexico take steps to decrease the take of endangered

turtles the U.S. industry should receive credit so to speak from those steps and not be require to undergo further expansion of mandatory TED requirements.

VII. INDUSTRY COUNTER PROPOSAL

"GULF OF MEXICO

A.) Phase I:

1.) Effective July 15, 1987, TEDs will be mandatory in depths less than 10 fathoms providing that TED's are available to fishermen and that fishermen who can demonstrate they are unable to purchase a TED shall be exempted from the mandatory requirement for a period not to exceed January 1, 1987 at which time TED usage shall be mandatory regardless of availability.

2.) The Louisiana seasonality proposal made earlier remains in effect.

3.) Phase I does not apply to inshore.

B.) Phase II:

1.) Effective July 15, 1988, TED's shall be mandatory in depths less than 15 fathoms, unless it can be demonstrated that the level of voluntary use of TED's by fishermen in non-mandatory TED areas is accomplishing 80 percent effort coverage, in which case the extension beyond 10 fathoms shall be waived.

2.) The continuation of the Louisiana seasonality proposal made earlier is dependent upon the determination of clustering, net size, etc. which would be excluded from mandatory TED coverage.

3.) Inshore is included for mandatory TED coverage effective July 15, 1988.

C.) Phase III:

1.) Agreeable to a mandatory review, and to the inclusion of the Mexico proposal, however not agreeable to the statement TED's would automatically be mandatory throughout the statistical zones as stated in the Environmental Community proposal."

.....

During discussion the Industry explained they are not convinced enough TED's can be manufactured and distributed to meet the demand resulted from their proposal, and that fishermen who are seeking to purchase TED's should not be forced to give up their season or fish illegally due to the inavailability of

TED's. Further, fishermen should not be required to use a NMFS TED, for example, merely because that is the only one available if they are desirous of using a different TED which is more appropriately suited to their needs and with which they feel comfortable.

In further explanation of their proposal, the Industry pointed out the July 15 effective dates make sense given the current opening/closure dates of the fisheries. The Industry proposal in Phase II to provide credit for voluntary usage of TED's in non-mandatory areas would not result in reducing the 10 fathom depth mandatory TED coverage outlined in Phase I.

VIII. FINAL DISCUSSIONS

A.) Milton Kaufman distributed his draft recommendations regarding International approaches the parties may wish to pursue. The parties will deal with this at the next meeting.

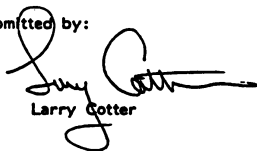
B.) As regards additional data requests, Eldon Greenberg and Mike Weber were designated by their respective groups to coordinate and review in advance of the next meeting any data requests. Those requests are in turn to be coordinated through Jim Douglas. The Mediator expressed his desire to keep additional data requests to an absolute minimum.

C.) The next meeting will commence Monday, December 1, at a place to be determined in Houston, Texas. The parties will keep the entire week open for the conclusion of these discussions.

IX. ADJOURNMENT

The session was adjourned at 2:40 P.M. November 12.

Minuted submitted by:


Larry Gotter



Center for
Environmental
Education

EXHIBIT U

3 February 1987

Dr. Anthony Calio, Administrator
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
Washington, D.C. 20230

Dear Dr. Calio:

In December of last year, representatives of the conservation community and the shrimp industry completed the negotiations that you had sponsored regarding the incidental capture of sea turtles in shrimp trawls. These negotiations, in which both sides aggressively presented their views, culminated in a comprehensive agreement under which requirements for use of Turtle Excluder Devices (TED) in the fishery will be phased in during the next three years.

We entered into these negotiations with the understanding that the endorsement of a negotiated agreement by the industry leaders would secure greater compliance for a program of TED use than we might otherwise have expected. With this in mind, the conservation community made concessions that we might not otherwise have made—once again in the interest of securing greater compliance.

We did not undertake these concessions lightly. In the Gulf of Mexico, for instance, we agreed to restrict TED requirements in many areas to waters within the 15 fathom line in the second year. We did so, although there is considerable evidence that the capture of adult Kemp's ridley and other sea turtles is a regular occurrence in deeper water. However, as the industry did not agree with us on this point, we conceded deeper water, expecting that in return we would be assured the industry's support for the agreement.

As you noted in your letter of invitation to participate in the negotiations, voluntary compliance with a regulatory program is important to the success of the program. This is especially true in this case for two reasons. First, the number of participants and the geographical distribution of effort are very large, making enforce-

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ment difficult. Second, this enforcement difficulty is aggravated by having to enforce a boundary, which can easily be violated without detection.

We recently learned that the representative of the Concerned Shrimpers of Louisiana (CSL) has been directed not to sign the agreement by his board of directors. This is particularly frustrating for us since we fashioned the "Louisiana Variable" in the agreement specifically to meet a difficulty that the CSL representative had identified in the last hours of the negotiations.

The letter by which the CSL representative informed you of the decision of his board of directors largely restates arguments that were fully presented in the negotiations. We were quite aware that industry was concerned about possible shrimp loss from trawls using TEDs. However, the Endangered Species Act clearly places the greatest emphasis upon the conservation of endangered species and does not allow the consideration of economic factors in protecting endangered species from human activities. Fortunately, TED technology provides a means for avoiding closure of the fishery altogether.

The letter from CSL alleges that the conservation community turned down an offer by the industry to support hatchery programs. First, the industry never presented such a proposal during the negotiations. Second, the CSL representative's confidence in headstarting as a conservation technique is misplaced. Currently, sea turtle headstarting programs, such as that conducted by NMFS at its Galveston Laboratory, are research programs. Headstarting is not a proven conservation technique and will not be, until a headstarted turtle, released to the wild, returns to a beach and deposits eggs that produce viable hatchlings. We encourage industry contributions to this program, but emphasize that headstarting is an experimental technique.

We commend your efforts to forge a workable plan for addressing the incidental capture of sea turtles in shrimp trawls. Without your initiative in proposing the negotiations we completed in December, there would have been considerable conflict over this issue. As it is, the negotiations successfully addressed conflicting concerns and interests while insuring that the conservation requirements of the Endangered Species Act were met.

We believe that the agreement is fair and equitable and we plan to stand by it. However, the lack of support for the agreement by two large organizations in the Gulf causes us concern. As long as we could count on the support of the industry in the western Gulf, we had reason to believe that compliance resulting from this support would overcome the acknowledged enforcement difficulties created by geographically limited TED requirements. We suggest that NMFS consider a more aggressive enforcement strategy in the western Gulf.

Finally, we urge NOAA to issue proposed regulations by mid-February at the latest. Later issuance will jeopardize the opportunity for solicitation and incorporation of public comments in time to allow issuance of final regulations well before July 15, 1987.

As always, we are eager to discuss these matters with you at your convenience.

Sincerely,


Michael Weber
Center for Environmental Education


Michael Bean
Environmental Defense Fund


Milton Kaufmann
Monitor International


Bruce Jaidogian
Greenpeace

MW:mw

cc. Larry Cotter
William Evans
Jim Douglas

EXHIBIT V

Appendix Table 1. SELECTED REFERENCES INVOLVING THE INCIDENTAL CATCH OF SEA TURTLES BY THE SHRIMP INDUSTRY

- ANNON. 1976. Incidental capture of sea turtles by shrimp fishermen in Florida. Preliminary report Florida West Coast Survey. Univ. Fla. Marine Advisory Program. 3 pp.
- ANNON. 1977. Alabama shrimp fishermen interviews for 1977-78. Marine Resources Office. Alabama Cooperative Extension Service. 1 pp.
- BULLIS, W. and S. DRUMMOND. 1978. Sea turtle captures off the southeastern United States by exploratory fishing vessels. In: Proceedings of the Florida and interregional conference on sea turtles, 24-25 July 1976, Jensen Beach, Florida, ed. by G. Henderson. Fla. Mar. Res. Publ. No. 33:45-50.
- CALDWELL, D.K. 1963. The sea turtle fishery of Baja California, Mexico. California Fish Game 49:140-151.
- CARR, A., and L.H. OGREN. 1959. I. Nesting and migration of the Atlantic loggerhead turtle. In: The Atlantic loggerhead sea turtle, *Caretta caretta caretta* (L.), in America, p. 295-305. Bull. Fla. State Mus., Biol. Sci 4(10):295-308.
- CARR, A.F., M.W. CARR, and A.B. MEYLAN. 1978. The ecology and migrations of sea turtles. 7. The West Caribbean green turtle colony. Bull. Amer. Mus. Nat. Hist. 1962(1):1-46.
- CATO, J.C., F.J. PROCHASKA, and P.C.H. PRITCHARD. 1978. An analysis of the capture, marketing and utilization of marine turtles. National Marine Fisheries Service. Cont. No. 01-7-042-11283. 119 pp.
- CHAVEZ, H. 1969. Tagging and recapture of the lora turtle (*Lepidochelys kempi*). Int. Turtle Tortoise Soc. J. 3(4):14-19, 32-36.
- COX, B.A. and R.G. MAUERMAN. 1976. Incidental catch and disposition by the Brownsville-Port Isabel Gulf shrimp fleet. Cameron Co. Ext. Ser., San Benito, Texas and Texas Shrimp Assoc. Brownsville, Texas. 55 pp.
- CROUSE, D.T. 1982. Incidental capture of sea turtles by U.S. commercial fisheries. Unpublished report to the Center for Environmental Education. 19 pp.
- DOBIE, J.L., L.H. OGREN, and J.F. FITZPATRICK, JR. Food notes and records of the Atlantic ridley turtle (*Lepidochelys kempi*) from Louisiana. Copeia 1961 (1):109-110

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American Museum of Natural History

30 June 1987

Congressman Gerry E. Studds
Chairman, Subcommittee on Fisheries and
Wildlife Conservation and the Environment
U.S. House of Representatives
543 House Annex II
Washington, D.C. 20515

Dear Congressman Studds:

I am writing in reference to a letter (dated 5 May 1987) addressed to Secretary of Commerce Malcolm Baldrige from William Guate, Attorney General of Louisiana, concerning the implementation of Turtle Excluder Devices (TEDS). Attorney General Guate incorrectly uses data that I supplied to Natural History Magazine regarding the capture of Kemp's ridleys in Long Island Sound (see enclosed articles). It is stated in the letter that the capture of seven Kemp's ridleys exceeds that of all shrimp fishermen operating in Texas, Louisiana, Mississippi, Alabama and Florida combined. The Attorney General is mistakenly comparing the Long Island figure to the number of Kemp's ridleys captured in the Gulf of Mexico on shrimp trawlers on which there was a NMFS observer (a total of 6 turtles). This total of 6 represents only a factor by which the total number of ridleys captured by all Gulf trawlers can be calculated. The National Marine Fisheries Service estimates that Gulf shrimpers catch not 6, but 1,726 ridleys annually. Of these, 501 die.

I would also like to point out that even with correct figures, there is no basis for comparison of Long Island pound net captures and incidental catch associated with shrimp trawls. All seven ridleys captured in Long Island Sound were released alive. Furthermore, these turtles are immature (22-36 cm carapace length), whereas shrimp trawlers have a heavy impact on adult turtles. Eighty-four percent of the recaptures of adult female ridleys originally tagged at the nesting beach have been from shrimp trawls. This loss of the most valuable members of the population is the most serious threat the species currently faces.

Attorney General Guate offers the opinion that increased protection on the nesting beach in Mexico and additional hatchery efforts are the most effective tools for restoring ridley populations. I would disagree with this statement. While both are valuable measures, they are not sufficient in themselves to effect the recovery of the species. The nesting beach already enjoys rigorous protection, thanks to U.S. and Mexican governmental efforts,

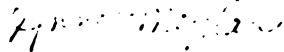
Central Park West at 79th Street New York, New York 10024-5192, USA Telephone (212) 873-1300

and yet this has failed to halt a steady decline in numbers of female turtles arriving at the nesting beach. Hatchery projects remain experimental, and are extremely costly. It is clear that at the current level of endangerment of Kemp's ridley, protection of turtles on their feeding grounds by the implementation of TED's is the most logical and effective approaches that can be taken.

As a sea turtle biologist and a member of the Marine Turtle Specialist Group of the International Union for the Conservation of Nature (IUCN), I have followed the situation of Kemp's ridley with great concern for almost a decade. At the 1978 national meeting of the American Society of Ichthyologists and Herpetologists, Dr. Archie Carr and I called attention to the rapid decline in the numbers of females nesting at the sole breeding locality at Rancho Nuevo, Mexico. As the enclosed articles indicate, I am currently involved in research on the species in New York waters, where we have documented cold-stunning mortalities during the last two winters. It is my opinion that the implementation of TED in U.S. and Mexican waters is urgent to prevent the further decline of this species. I hope that Congress will take speedy and decisive action, as is its mandate under the Endangered Species Act.

Thank you for your consideration.

Respectfully submitted,



Anne Meylan, Ph.D.
Associate in Herpetology
and Member, IUCN Marine
Turtle Specialist Group

cc: William J. Guste

Riddle of the Ridleys

Frozen and stranded, were these rarest of sea turtles giving a clue to their secret migrations?

by Anne Barkau Meylan

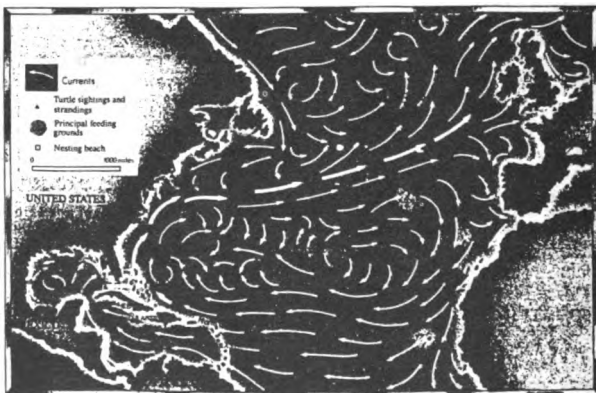
Twelve years studying sea turtles in southern climes had not prepared me for a December day on a windswept beach along New York's Long Island Sound. Along with rescue teams from the Okeanos Ocean Research Foundation, I was scouting the beaches near Riverhead, Long Island, in search of beached sea turtles stunned by the unusually cold weather. The windchill factor made it feel like minus fifteen degrees. Swaddled in down parkas, wool scarves covering all but our eyes, we plodded against the wind down stretches of rocky shore, where high water prevented our jeep's passage. Every few hundred yards, we found what we had come for—still and sometimes lifeless forms in the piles of storm wrack at the high-tide line. These were Kemp's ridleys, the most endangered of all sea turtles, and a species only rarely recorded in New

York waters. If I hadn't seen the turtles myself, I would have thought there had been some mistake in their identification. Even within the ridley's primary range of the Gulf of Mexico, sightings are uncommon these days, and the precipitous decline in the number of females arriving at the turtles' nesting beach has demographers wondering just how many more years Kemp's ridley will be with us. The beaching of dozens of these turtles in Long Island Sound last December made an arresting find.

Before the day was over, our rescue team took seven ice-cold ridleys back to the house of Okeanos director Sam Sadove, where they joined others in a makeshift "warm-up room." Most of the turtles we picked up had suffered too much from the cold to recover or were already dead when found. Eighteen were

still alive and responded well to gradual warming in kiddie pools that Sam and his wife, Gill, had added to the furnishings of the small house in Jamesport. That night the enthusiastic pounding of turtle flippers splashed salt water all over the walls and kept us wide awake. Outside the temperature went down to the midteens, and in the marina next door the water froze.

For the next several weeks, stranded turtles continued to appear along the eastern two-thirds of Long Island's north shore. By mid-March, forty-four ridleys, two green turtles, and ten loggerheads had been picked up by Okeanos, the agency charged by New York State to handle strandings of both sea turtles and marine mammals. Another five or six turtles were reported but could not be recovered. Because several of the strandings occurred in seldom-traveled marshes, we assume that



Turtle Travels

Where do Kemp's ridleys go after leaving their nesting beach in Mexico? Records of sightings and strandings suggest these rarest of sea turtles may follow major ocean currents out into the Atlantic where they will mature, eventually returning to the Gulf of Mexico to breed.

Jim Lathrop

other stranded sea turtles went unnoticed. Cold-stunning events involving sea turtles are not unprecedented, having occurred in Florida in 1894/95, in 1977, 1981, and 1985, but Kemp's ridley was never the primary victim.

Seven of the turtles that survived the ordeal were flown south and released in the Florida Keys under the supervision of the National Marine Fisheries Service. All were tagged with numbered metal bands bearing a return address, but so far no recaptures or sightings have been made. Thirty-five dead turtles, most of them ridleys, were donated by Olazano to the Herpetology Department of the American Museum of Natural History, where they will be a source of scientific data.

There seems little doubt that the extreme cold was responsible for the strandings. Three different species were similarly affected soon after the onset of the severe weather. Nearly all of the eighteen turtles found alive responded well to gradual warming—some making swift

and complete recoveries. Necropsies conducted on the turtles by Olazano revealed no signs of injury or exposure to toxins.

This cold-stunning episode was only the latest in a series of riddles the ridley has presented to the world. First described by Samuel Garman in 1880, Kemp's ridley (*Lepidochelys kempi*) was not widely recognized as a distinct species of sea turtle until the 1940s. It was chronically confused with its close relative, the olive ridley (*L. olivacea*), and with the loggerhead turtle (*Caretta caretta*). To this day, improperly labeled museum specimens are commonplace.

In the 1950s the ridley's riddle concerned its ancestry. Many biologists regarded it as a hybrid, the result of a cross between a loggerhead and a green turtle. No one had ever seen ridleys mating or knew where they nested. Fishermen in the Florida Keys were familiar with ridleys because they caught them in their nets, but they were convinced that the turtles were sterile. Herpetologist Archie Carr of the University of Florida interviewed

scores of fishermen about ridleys. "This 'ere ridley don't have no young 'uns," he was told. "He's at the end of the line, like a mule." Many of Carr's early years were spent searching tropical beaches for the breeding ground of the enigmatic Kemp's ridley.

Only in 1961 did the scientific world learn the ridley's well-kept secret. A private film made in 1947 by a Mexican engineer, Andres Herrera, showed thousands of Kemp's ridleys emerging on a lonely stretch of shore in the state of Tamaulipas, Mexico, some 200 miles south of Brownsville, Texas. The site bears the name of a nearby town, Rancho Nuevo. Thorough exploration of Gulf and Caribbean shores by sea turtle biologists for the last twenty-five years has failed to reveal any other sites of concentrated nesting. Ninety-five percent of the population of nesting females comes to this seventeen-mile strip of beach, with the remainder nesting in the neighboring state of Veracruz. In its virtual allegiance to a single breeding locality, Kemp's ridley is unlike any other sea turtle in the world.

From April to August each year, Kemp's ridleys aggregate and mate off the nesting beach at Rancho Nuevo. While the reproductive cycles of most other sea turtles are longer than a year, many adult female ridleys appear to be on an annual timetable. Some females may emerge on the beach to nest several times in one season. An average clutch consists of 110 eggs. Males, present in the waters off the nesting beach, do not leave the water.

Herrera had the luck to film an *arribada*, or arrival. These mass nesting emergencies had previously been documented only for the olive ridley, a species particularly common along the Pacific coasts of Mexico and Central America. The *arribada* appears to be a behavior unique to the genus *Lepidochelys*, and the *arribadas* of olive ridleys are considered one of the wonders of the world. Between 50,000 and 150,000 turtles emerge over six or seven nights to lay their eggs at Nancite on the Pacific coast of Costa Rica.

Calculations based on Herrera's film placed the number of Kemp's ridleys nesting at Rancho Nuevo in 1947 at 40,000. By 1966, when the Mexican government installed its first camps on the beach to monitor and protect turtles, the *arribadas* had shrunk to only 2,000 turtles, a decline of 95 percent. The apparent cause for the decline was excessive egg harvesting by local *hurveros* (egg takers), combined with predation by coyotes and erosion of nests by storm tides. A joint conservation



Kemp's ridley hatchlings leaving the nesting beach at Rancho Nuevo, Mexico

effort was launched by Mexican and U.S. government agencies in 1978, but the number of females arriving at Rancho Nuevo continues to decline. For the last eight years, an estimated 500 to 750 females per year come to nest. Egg poaching has been virtually eliminated, but a relatively new problem, incidental capture (and drowning) in shrimp nets, threatens to deliver the *coup de grâce*. Shrimp trawlers take a heavy toll of male and female turtles both off the nesting ground and on the feeding ground to which the ridleys disperse after nesting.

Recaptures of tagged individuals show two principal foraging areas for the adults: off the coast of Louisiana (from Marsh Island to the Mississippi Delta) and in the waters off the Tabasco-Campeche area of Mexico (Tupiclo, Tabasco to Champón, Campeche). It is no accident that shrimp trawlers and ridleys come together in these places. Ridleys feed primarily on crabs that share the habitat of white, pink, and brown *Penaeus* shrimp. Portunid crabs (*Callinectes*, *Ovalipes*) seem to be favorite prey, but clams, mussels, and snails are also eaten.

We know far less about the whereabouts of young ridleys. If ridleys follow the generalized life history hypothesized for other sea turtles, we can expect that they live in different places at different times in their lives. Hatchlings leave the nesting beach and travel into the open ocean where they take up a pelagic existence among weed- and drift-lines that form along the edges of major current systems. For some species this period may last several years. It is followed by entry into coastal areas. At some of these areas one finds young turtles almost exclusively. Once mature, turtles move on to either a permanent feeding ground or a series of feeding grounds through which they routinely travel. Except for migrations to the nesting beach, the rest of the turtle's life is spent in these feeding areas.

The degree to which Kemp's ridley conforms to this general life history is not known. We do know that ridleys of all sizes are found in the Gulf of Mexico, and it is possible that they spend their entire life there. An important developmental habitat for subadult ridleys was discovered in the 1950s on the west coast of Florida at Cedar Key. Since then, other sites where young ridleys routinely appear have been found in the Gulf of Mexico from Texas to Florida.

Ridleys are regularly seen in several places along the eastern seaboard of the United States as far north as Cape Cod, Massachusetts. This contingent of the population, which is practically all juve-

niles, has been the subject of controversy for decades, because great distance and contrary currents would appear to make it impossible for these turtles ever to return to the nesting beach at Rancho Nuevo. Those who believe these turtles are lost to the population point out that many perish in northern waters at the onset of cold weather, and those that survive have no clear way to follow currents back to the Gulf of Mexico. Despite thorough searching by sea turtle biologists, ridleys are not known in the Bahamas or the Greater and Lesser Antilles, through which they would have to pass on their way back to the Gulf of Mexico from the Atlantic.

Following the Long Island cold-stunning episode, a review of both published and unpublished records of ridley sightings along the Atlantic coast convinced me that the actual number of ridleys along the coast may be far higher than most people now suspect. The National Marine Fisheries Service reports that 77 out of a total of 273 ridleys (29 percent) that stranded in the Gulf and off the southeastern states of the United States between 1980 and 1985 were recovered in the Atlantic. Ridleys are routinely caught in shrimp trawls that operate in the area around Cape Canaveral, Florida. During the period from 1979 to 1985, 68 Kemp's ridleys were recorded in Chesapeake Bay by the Virginia Institute of Marine Science, and scientists there project a seasonal population of 200 to 300 individuals. The ridley is the most common species of marine turtle recorded at the Wellfleet Bay Wildlife Sanctuary at Cape Cod, Massachusetts. At a recent meeting, it was reported that 88 ridleys were found in that area from 1976 to 1985.

Before last December, there were only three published records of ridleys in Long Island Sound, and only eight for the entire state of New York. This spotty record for ridleys may be more a case of poor record keeping than a true lack of ridleys. Since the 1985 cold-stunning event, more reports of New York ridley sightings from previous years have come in. Specimens in the American Museum of Natural History and in private collections document the occurrence of ridleys at one Long Island beach alone in at least three different years: 1957, 1983, and 1985. Were these, along with the others stranded last winter, merely ill-fated waifs swept out of their normal range in the Gulf of Mexico? Or is Long Island another station on the turtles' regular migratory route? How does this "lost" east coast population fit into the ridley enigma?

The Gulf Stream flows north along the eastern seaboard of the United States and

could easily pick up animals that have left the Gulf of Mexico through the Straits of Florida. Archie Carr has suggested that once the turtles reach northern waters, meandering eddies of the current deliver them right to the coast. When these eddies split off, they carry with them whatever animals are in the warm water of the main current. The sporadic occurrence of tropical fish in inlets along the south shore of Long Island is well known and often attributed to this phenomenon. Such transport of ridleys by the Gulf Stream could occur whether they were migrants or waifs.

We know that over the short term ridleys are perfectly capable of living in the bays along the eastern seaboard. The turtles that were found in Long Island Sound in 1985 appeared to be in remarkably healthy condition. They were juveniles, as are practically all those found along the eastern seaboard, and remarkably similar in shell size, averaging some eleven inches. Possibly they were part of a single age class or even a single "fleece" that traveled together from some distant place. Olive ridleys are known to travel in groups, and in the 1930s a group of Kemp's ridleys, described by an observer as a fleet, was seen traveling from Buzzards Bay into Vineyard Sound, Massachusetts.

The observations that almost all the ridleys along the eastern seaboard are immature, that they are in healthy condition and willing to eat, and that at least some of them are traveling in groups support the idea that the east coast is part of the normal range of ridley migration.

The theory that ridleys along the eastern seaboard are accidental strays is supported by the record of strandings of small, usually cold-bummed ridleys on the opposite side of the Atlantic—in Scotland, Wales, England, the Channel Islands, the Netherlands, France, the Azores, and Madeira. The strandings are most numerous in late fall months, with a peak in December.

From controlled tolerance tests, we know that Kemp's ridleys become sluggish and float at temperatures below 13°C; small ones succumb at 5°C. Thus, those in the northeastern United States must either hibernate or leave the area during the winter months. Although loggerheads, green turtles, and possibly ridleys overwinter by burrowing into the mud at more southern latitudes, there is no evidence to date that any sea turtles overwinter in colder northeast waters. There are other turtles that do, however, such as the diamondback terrapin, which hibernates in some of the same areas where ridleys have been found.

Ridleys along the eastern seaboard may simply retreat to southern waters of the United States during the winter. A small number of recaptures of tagged individuals supports this theory. Some of the loggerheads that nest on beaches in the southeastern United States follow such a pattern, with a seasonal advance into, and retreat from, northern waters. The route that loggerheads follow back south, and its relationship to currents, is unknown. One possibility is that they travel close to the coast in order to avoid the contrary Gulf Stream, but against-current migration is also possible and is well documented for adult loggerheads, as well as for adult green turtles.

A third possibility is that ridleys along the eastern seaboard eventually embark on a purposeful migration that takes them out into the Atlantic. By keeping to warm-water currents and eddy systems such as the Sargasso Sea, they may escape cold winter temperatures. Those that perish along the U.S. coast and on European shores each winter may be the unfortunate few that did not leave coastal waters in time or make it into appropriate current

systems. Archie Carr has recently suggested that young loggerheads that hatch on beaches in Florida, Georgia, and the Carolinas spend several years in the open Atlantic, perhaps making several trans-oceanic journeys before reentering coastal habitats. There are numerous open-sea sightings of loggerheads to support his theory. The lack of ridley sightings may be due to the perennial identification problem that plagues the species or to its much smaller population.

At what size and by what route young ridleys might leave the Atlantic Ocean on their return to Ranch Nuevo is open to speculation. Unknown in the Caribbean, the one place they do occur with some regularity is in the Florida Keys. With some against-current maneuverings, they may be able to work their way to the Keys

and on into the Gulf of Mexico. Perhaps the nearly grown ridleys at Cedar Key, on the west coast of Florida, have already had their look at the world.

The Long Island cold-stunning episode invites new speculation. That there should be forty-five young ridleys out there in any one place in the ocean today is a promising sign. Judging from the size of the turtles recovered in New York, they most likely hatched at Rancho Nuevo after the Mexican government began its program of protection in 1966. It may mean that we can expect to see more young ridleys in the future and solve the mysteries of their migration.

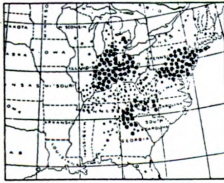
Anne Barkan Meylan is an associate in the Department of Herpetology at the American Museum of Natural History.

Postscripts

The Cicadas Are Coming, the Cicadas Are Coming

Nineteen eighty-seven will be another big year for the seventeen-year cicada. According to evolutionary biologist Chris Simon of the University of Hawaii (who wrote for us on the periodical cicada in May 1979), this year's mass emergence began in Georgia in late April and will begin in Indiana and New York in mid-May. The numbers should be overwhelming in the Baltimore and Washington, D.C., areas.

Periodical cicadas have thirteen- or seventeen-year life cycles, and scientists group all of those that emerge contiguously and synchronously in numbered



"broods" (year classes). Each brood was once thought to have evolved independently after the last glacial maximum 18,000 years ago, but Simon's recent research on biochemical variation of enzyme proteins among broods demonstrates that all periodical cicadas stem from three major groups—eastern seventeen-year broods, western seventeen-year broods, and centrally located thirteen-year broods.

All of the members of brood 10, having passed through five nymphal stages since they went underground in 1970, will emerge from the ground within a one- or two-week period, when trees will resound with the singing of the males. After mating, the females will lay their eggs in slits they have made in tree branches. Adults will die within four to six weeks of their emergence. And the nymphs that hatch



C. Allen Morgan


from the eggs will drop down from the branches and burrow into the earth, starting another cycle.

Turtle Tracks

Kemp's ridleys (see *Natural History*, November 1986) are the world's rarest and most secretive sea turtles. Born on a single beach in Mexico, the turtles make tracks into the Gulf of Mexico and then vanish, except for occasional sightings on coastal feeding grounds or rare strandings. Anne Meylan (an associate in herpetology at the American Museum of Natural History) witnessed such a stranding in December 1985, when cold-stunned, nearly

dead Kemp's ridleys began washing up on the icy New York shore of Long Island Sound. By the end of the winter, Meylan and members of the Long Island-based Okeanos Ocean Research Foundation had recovered some fifty turtles, but only a few could be warmed and revived.

After a search through the records of ridley strandings and sightings along the East Coast from Florida to Cape Cod, Meylan suggested that Long Island Sound may be a regular stop on the yet uncharted migration route of these rare turtles: from the gulf through the Straits of Florida, north with the Gulf Stream, perhaps as far as Cape Cod (with time spent feeding in Long Island Sound), then



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out into the swirling currents of the Sargasso Sea before a return trip to the gulf breeding grounds.

But without more reports of ridleys in Long Island Sound, the stranded turtles might have just been considered victims of weather and currents. Meylan now reports that the turtles "are definitely out there again." Last summer, fishermen using traps and nets in Long Island Sound came up with seven live ridleys. And during the past winter, twenty-seven more Kemp's ridleys were found stranded on the beaches of the sound.

With growing interest in the fate of

these turtles, state and federal agencies are supporting new efforts to study and preserve them. Shrimp nets, one of the major killers of Kemp's ridleys, may soon be less lethal. A device has been developed that allows turtles to escape from the nets after accidental capture and will soon be required in inshore waters off the east coast of Florida and in the gulf, where ridleys are abundant.

Fertile Ferret?

On March 1, 1987, a team from the Wyoming Game and Fish Department



Photo: S. Cameron



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

IN REPLY REFER TO
6844.2 (240)

JUL 3 - 1987

Honorable Gerry E. Studds
Chairman, Subcommittee on Fisheries
and Wildlife Conservation and the
Environment
Committee on Merchant Marine and Fisheries
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your recent inquiry requesting additional information for the record concerning the recent hearing on reauthorization of the Endangered Species Act. We appreciate your continuing interest in our activities.

In your letter you asked two basic questions:

(1) What steps is the Bureau of Land Management (BLM) taking to enhance protection of the tortoise?

(2) To what extent will the Desert Tortoise Council's recommendations concerning the Beaver Dam Slope population in Utah be reflected in the Bureau's tortoise management plan?

In response to your first question, which we understand to relate to the Beaver Dam Slope population in Utah, we have summarized our actions below.

Desert tortoise habitat in Utah is managed by the Dixie Resource Area of the Cedar City District. The land management plan (referred to as the management framework plan), encompassing tortoise habitat within that Resource Area, resulted in positive decisions and actions to benefit the tortoise. For example, the multiple use decisions dealt with: (1) establishment of the 3,040-acre Woodbury Desert Study Area; (2) the reduction of livestock grazing on the Castle Cliffs Allotment by a specified level; (3) the restriction of vehicle use to designated roads and the development of a habitat management plan (HMP); (4) the withdrawal of the area from mineral entry under the 1872 mining law; (5) the closure to oil and gas leasing for the study area, with no surface occupancy on the one-half-mile fringe area; (6) fencing of the area; and (7) predator control to protect tortoises.

On areas outside the study area, the following management was decided upon: (1) opening of areas to oil and gas leasing with four special stipulations to mitigate damage to tortoises and habitat; (2) continuation of livestock grazing under an approved grazing system with season of use adjusted to protect tortoises; and (3) restriction of vehicle use to existing roads. In addition, recommendations were made to control predators and acquire certain State and private lands.

Subsequent to the land management plan and Federal listing of the Beaver Dam Slope population as threatened, an RMP was developed in 1980 to carry out actions prescribed by the management framework plan. The actions specified in the RMP included: (1) establishment of a desert tortoise monitoring program; (2) development of a plan to relocate desert tortoises into the Beaver Dam Slope population; (3) establishment of a tortoise den inventory program to ensure dens are adequately maintained; (4) implementation of a livestock grazing system and plan within the Beaver Dam Slope area; and (5) protection of the tortoises from excessive predation by foxes and coyotes.

Thus far, a 1,500-acre enclosure has been fenced, livestock numbers have been adjusted, off-road vehicle designations completed, and oil and gas leasing adjusted to meet specified guidelines. In addition to BLM management, the Fish and Wildlife Service is preparing a recovery plan for the Beaver Dam Slope population. All major BLM actions on the Beaver Dam Slope have undergone a section 7 consultation and biological assessment since listing.

As to your second question which relates to the specific recommendations of the Desert Tortoise Council, we first would like to say that we appreciate the interest and management suggestions provided by that organization. We anticipate that as resource management plans and habitat management plans for the Beaver Dam Slope area are prepared and updated, the Desert Tortoise Council will be invited to actively participate in developing management prescriptions to meet desert tortoise habitat objectives. This will ensure that specific actions of the nature recommended by the Council will be considered in accordance with established procedures that ensure public review and input.

Any closures or restrictions placed on hunting and shooting in the Beaver Dam Slope habitat or elsewhere would require action by the State wildlife agency, since the Bureau has no authority to make such closures. As to the captive breeding of tortoises, we would agree that this would appear to have merit. Any such undertaking should be a cooperative effort and pursued through the initiative of the State wildlife agency and/or other organizations.

The Bureau has been actively working with the Desert Tortoise Council for several years. The Desert Tortoise Council also is on the mailing lists maintained by our various Districts and Resource Area offices actively involved in management of tortoise habitat. We will continue consulting with officials of that organization and other appropriate groups during future planning and associated activities.

Again, thank you for your interest in our efforts on behalf of the desert tortoise. Please let us know if we can be of further help.

Sincerely,



Director

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